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OM nucleic - nucleic search, using sw model

Run on: October 12, 2003, 11:43:37 ; Search time 113.333 Seconds  
(without alignments)  
9592.294 Million cell updates/sec

Title: US-09-610-313-31  
Perfect score: 2463  
Sequence: 1 gtcagccaccatggcgga.....gggctagccaggtgaattc 2463

Scoring table: IDENTITY\_NUC  
Gapop 10.0 , Gapext 1.0

Searched: 569978 seqs, 220691566 residues

Total number of hits satisfying chosen parameters: 1139956

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : Issued Patents NA: \*  
1: /cgn2\_6/ptodata/2/ina/5A\_COMB.seq.\*  
2: /cgn2\_6/ptodata/2/ina/5B\_COMB.seq.\*  
3: /cgn2\_6/ptodata/2/ina/6A\_COMB.seq.\*  
4: /cgn2\_6/ptodata/2/ina/6B\_COMB.seq.\*  
5: /cgn2\_6/ptodata/2/ina/PTCUS\_COMB.seq.\*  
6: /cgn2\_6/ptodata/2/ina/backfiles1.seq.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match %	Length	DB ID	Description
1	1651.8	67.1	4307	4	US-09-552-950-2
2	1624.6	66.0	9772	4	US-09-552-950-5
3	1203.6	48.9	9010	4	US-09-184-418C-8
4	1172.6	47.6	8972	4	US-09-184-418C-9
5	1165.4	47.3	8959	4	US-09-184-418C-11
6	1142	46.4	8992	4	US-09-184-418C-4
7	1106.8	44.9	2601	3	US-09-117-217-7
8	1106.8	44.9	2601	3	US-09-117-217-9
9	1106.8	44.9	2601	3	US-09-117-217-11
10	1106.8	44.9	2601	3	US-09-117-217-13
11	1106.8	44.9	2601	4	US-09-735-487-7
12	1106.8	44.9	2601	4	US-09-735-487-9
13	1106.8	44.9	2601	4	US-09-735-487-15
14	1106.8	44.9	2601	4	US-09-735-487-13
15	1106.8	44.9	4307	4	US-09-552-950-1
16	1106.8	44.9	9719	4	US-09-700-304-1
17	1105.2	44.9	9050	4	US-09-184-418C-7
18	1100.4	44.7	7399	2	US-08-418-848A-9
19	1100.4	44.7	9709	2	US-08-188-583-5
20	1100.4	44.7	9709	3	US-08-388-353-1
21	1100.4	44.7	9709	3	US-08-488-551B-1
22	1100.4	44.7	9709	4	US-09-309-572-15
23	1100.4	44.7	12479	4	US-09-348-138-13
24	1100.4	44.7	12494	3	US-08-935-312-13
25	1100.4	44.7	12494	3	US-08-848-760B-33
26	1100.4	44.7	15581	3	US-08-646-538-35
27	1100.4	44.7	15581	3	US-09-503-222-35

28	1099.2	44.6	3000	4	US-09-184-418C-74	Sequence 74, Appl
29	1095.8	44.5	8968	4	US-09-184-418C-1	Sequence 1, Appl
30	1090.8	44.3	9737	2	US-08-944-449-7	Sequence 7, Appl
31	1090.8	44.3	9737	4	US-09-353-362-7	Sequence 6, Appl
32	1082.8	44.0	8954	4	US-09-184-418C-6	Sequence 83, Appl
33	1077.6	43.8	3017	4	US-09-184-418C-83	Sequence 101, App
34	1075.4	43.7	3011	4	US-09-184-418C-101	Sequence 2, Appl
35	1063.4	43.2	8987	4	US-09-184-418C-2	Sequence 3, Appl
36	1060.4	43.1	8953	4	US-09-184-418C-3	Sequence 10, Appl
37	1060	43.0	9060	4	US-09-184-418C-10	Sequence 3, Appl
38	1055.6	42.9	9746	1	US-08-022-835-3	Sequence 3, Appl
39	1055.6	42.9	9746	1	US-08-388-809-3	Sequence 3, Appl
40	1055.6	42.9	9746	2	US-08-647-714-3	Sequence 1, Appl
41	1054.4	42.8	8932	3	US-09-124-900-1	Sequence 4, Appl
42	1054.4	42.8	8933	3	US-08-463-210-4	Sequence 4, Appl
43	1054.4	42.8	8933	3	US-09-620-958A-3	Sequence 4, Appl
44	1054.4	42.8	8933	3	US-09-620-958A-4	Sequence 9, Appl
45	1054.4	42.8	8933	3	US-09-620-958A-9	Sequence 9, Appl

ALIGNMENTS

RESULT 1  
US-09-552-950-2  
; Sequence 2, Application US/09552950  
; Patent No. 6541248  
; GENERAL INFORMATION:  
; APPLICANT: Oxford Biomedica (UK) Limited  
; TITLE OF INVENTION: Anti-Viral Vectors  
; FILE REFERENCE: 674524-2004  
; CURRENT APPLICATION NUMBER: US/09/552,950  
; CURRENT FILING DATE: 2000-04-20  
; NUMBER OF SEQ ID NOS: 22  
; SOFTWARE: Patent in Ver. 2.1  
; SEQ ID NO 2  
; LENGTH: 4307  
; TYPE: DNA  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: Description of Artificial Sequence:gagpol-SYNGp - codon  
; OTHER INFORMATION: Optimised gagpol sequence  
US-09-552-950-2

Query Match	67.1%	Score	1651.8	DB	4	Length	4307
Best Local Similarity	82.5%	Pred. No.	1.4e+262	Indels	19	Gaps	4
Matches	1939	Conservative	0	Mismatches	391		
QY	33	GGCCACCCAGCGCCCAACATCTGTATGAGCGGCGACCACTTCAAGGGCCCAAGCGGCATCAT	92				
Db	1110	GACCAACTCCGCTACCATCATGATGAGCGCGGCACTTTCGGAAACCAACGCAAGATCGT	1169				
QY	93	CAAGTGTCTCAACTGCGGCAAGAGGCGCCACATCGGCCCAACTGCGGCCCGCCCGCCAA	152				
Db	1170	CAAGTGTCTCAACTGCGGCAAGAGGCGCCACATCGGCCCAACTGCGGCCCGCCCGCCAA	1229				
QY	153	GAGGGCTGCTGAATGCGGCGGAGGCGCCACCGATGAAGGACTGACCGGCGCCCA	212				
Db	1230	AAAGGGCTGCTGGAATGCGGCGGAGGCGCCACCGATGAAGGACTGACCGGCGCCCA	1289				
QY	213	GGCCAACTTCTTCCGCGAGGACCTGCGCTTCCCGGAGGCGCGCGAGTTCGCCAG	272				
Db	1290	GGCTAA-TTTTGTAGGAAGATCTGCGCTTCTTACAGGAAGCGCAGGAATTTTCTTC	1348				
QY	273	CGAGCAGAACCGCGCCCAACAGCCCGCCAGCGAGCTGCAGGT-----GGCGGCGCA	326				
Db	1349	AGAGCAGAACCGCGCCCAACAGCCCGCCAGCGAGCTGCAGGTCTGSGGTGCGCAAA	1408				
QY	327	CAACCCCGGAGCGGCGCGCGCCAGCGCCAGGCGCAAGGCA-----CCCTGACTTCCCCA	380				
Db	1409	CAACTCCCCCTCCGAAGCAGGAGGCGCGCCAGGCGCCAGGCGCGGCTGCTTCACTTCCCTCA	1468				
QY	381	GATCACCTGTGCGAGGCGCCCTTGTGTGAGCATCAAGGTGGGCGCGCAGATCAAGGAGGC	440				

Db 1469 GGTACAGCTTTGGAGCGACCCCTGTCACCATCAAGATCGGGGGGAGCTCAAGAGGC 1528  
 QY 441 CTTGCTGACACCGGCGCCGACACACCTGCTGAGAGATGAGCTTCCCGGCAATG 500  
 Db 1529 TCTCTGACACCGGAGACGACACCTGCTGAGAGATGCTGTTGCCAGGCCCTG 1588  
 QY 501 GAAGCCCAAGATGATCGGCGCATCGGCGCTTCAATCAAGGTGCGCCAGTACGACAT 560  
 Db 1589 GAAGCCCAAGATGATCGGCGCATCGGCGCTTCAATCAAGGTGCGCCAGTACGACAT 1648  
 QY 561 CTTGATGAGATCTGCGGCAAGAGCCATCGGACCTGCTGATCGGCGCCACCCCGT 620  
 Db 1649 CTTGATGAGATCTGCGGCAAGAGCCATCGGACCTGCTGATCGGCGCCACCCCGT 1708  
 QY 621 GAAATATCGGCGGCAACATGCTGACCCAGCTGGGCTGACCCCTGAACTTCCCATCAG 680  
 Db 1709 CAACATATCGGAGGCAACCTGTTGACGACAGATGTTGCAACCTGAACTTCCCATCAG 1768  
 QY 681 CCCCATCGAGACCTGCGCCGTTGAAGCTGAAGCCCGCATGAGACGAGCCCAAGTGAAGCA 740  
 Db 1769 CCGATATGAGAGCGGTACCGGTGAGAGCTGAGACCCCGGATGAGACGCGCGAAGTCAAGCA 1828  
 QY 741 GTGGCCCTTGAACCGAGAGAGATCAAGCCCTGACCGCATCTGCGAGAGATGAGAA 800  
 Db 1829 ATGGCCATTGACAGAGAGAGATCAAGGCACTGTGTGAGATTTGCAACAGATGAGAAA 1888  
 QY 801 GAGAGGAGAGATCAACAGATCGGCGCCGAGAACCCCTACAGACCCCGGTTCGCGCAT 860  
 Db 1889 GAGAGGAGAGATTTCTCCAGAGATGAGGCTGAGAACCCCTGACAGACCGCGGTTCGCGCAT 1948  
 QY 861 CAAGAGAGAGAGACAGACCAAGTGGCGCAAGCTGATGAGCTTCCCGAGCTGAACAAGCG 920  
 Db 1949 CAAGAGAGAGAGATCTGACAGAAATGGCGCAAGCTGTGGAATTCGCGAGCTGAACAAGCG 2008  
 QY 921 CACCCAGAGATCTTGGGAGAGTGCAGCTGGGATATCCCGACCCCGCGCTGAAGAGAA 980  
 Db 2009 CACCGAGAGATCTTGGGAGAGTGCAGCTGGGATATCCCGACCCCGCGCTGAAGAGAA 2068  
 QY 981 GAAGAGAGTACCGGTGCGGACGAGGAGAGAGCTTACATTCAGAGCTGGCGCGTGAAGAGAA 1040  
 Db 2069 GAAGAGAGTACCGGTGCGGACGAGGAGAGAGCTTACATTCAGAGCTGGCGCGTGAAGAGAA 2128  
 QY 1041 CTTCCGAGAGTACCGGCTTACACCATCCCGAGCATCAACAGAGAGACCCCGGATTCG 1100  
 Db 2129 CTTCCGAGAGTACCGGCTTACACCATCCCGAGCATCAACAGAGAGACCCCGGATTCG 2188  
 QY 1101 CTACAGATCAACGCTGCTGCCCGAGGCTGAGAGGAGAGCCCGACATCTTCCAGAGAG 1160  
 Db 2189 ATATCAAGTACACGCTGCTGCCCGAGGCTGAGAGGAGAGCTTCCCGACATCTTCCAGAGAG 2248  
 QY 1161 CATGACCAAGATCTGAGGCGCTTCCGCGCCCGACCCCGAGATCGTGAATCTACCA--- 1217  
 Db 2249 CATGACCAAAATCTGAGAGCTTCCCGCAACAGAACCCCGACATCTGCTATCTATCAAGTA 2308  
 QY 1218 ---GCCCCCTGTACGTGGCGACGACCTGAGATGAGCCAGACCGCGCAAGATCGA 1274  
 Db 2309 CATGATGATCTGTACGTGGCTCTGTATTAAGATAGAGGAGAGACCGACCAAGATCGA 2368  
 QY 1275 GAGAGTGGCGAAGACCTGCTGCGCTGGGCTTACACCAACCCCGACAGAGAGAGAGAG 1334  
 Db 2369 GAGAGTGGCGAAGACCTGCTGCGCTGGGCTTACACCAACCCCGACAGAGAGAGAGAG 2428  
 QY 1335 GAGAGCCCTTCTGATGAGTGGGCTACAGCTGACACCCGACCAAGTGAAGCCGTGAGCC 1394  
 Db 2429 GAGAGCCCTTCTGATGAGTGGGCTACAGCTGACACCCGACCAAGTGAAGCCGTGAGCC 2488  
 QY 1395 CATGAGAGTCCCGAGAGAGAGAGCTGACCGTGAACGACATCCAGAGCTGTGGGCA 1454  
 Db 2489 TATCGTGTCTCCAGAGAGAGAGAGCTGACCGTGAACGACATCCAGAGCTGTGGGCA 2548  
 QY 1455 GCTGAATGGGCGAGAGATCTACCCCGCATCAAGTGGCGAGTGTGCAAGCTGCT 1514

Db 2549 GTTGAATGGGCGAGTCAATTTACCAAGGATTTAAGTGAAGGACAGTGTGCAACTCT 2608  
 QY 1515 GCGCGCGCCCAAGGCTTGAACCGACATCGTGCCCTGACCCGAGAGGCGGAGCTTGAAGCT 1574  
 Db 2609 CCGCGAGAACCAAGGACTCAACAGAGTGAATCCCTTCAACCGAGAGGCGGAGCTCGAAT 2668  
 QY 1575 GCGCGAGAACCGGAGATCTGCGGAGCCCGGACCGGAGTGTACTACGACCCGAGCA 1634  
 Db 2669 GCGAGAGAACCGGAGATCTTAAAGAGCCCGTGCACCGGCTGTACTATGACCCCTCA 2728  
 QY 1635 GACCTGTGGCCGAGATCCAGAGAGAGGCGCACGACAGTGAACCTACAGATCTACCA 1694  
 Db 2729 GACCTGTATGCGCGAGATCCAGAGAGAGGCGCACGAGTGAACCTATGATTTACCA 2788  
 QY 1695 GAGAGCCCTTCAAGAACCTGAGAGCCGCAAGTACGCCAAGATGCGCACCGCCCAACCA 1754  
 Db 2789 GAGAGCCCTTCAAGAACCTGAGAGCCGCAAGTACGCCAAGATGAGGAGTGTCCCACTAA 2848  
 QY 1755 CGAGTGAAGCACTGACCGAGCGGTGCGAGAGATCGCATGAGAGATCGTGAATCTG 1814  
 Db 2849 CGAGTGAAGCACTGACCGAGCGGTGCGAGAGATCCACGAGAGATCGATGATCTG 2908  
 QY 1815 GAGCAAGACCCCAAGTTCGCGCTGCTCCATCCAGAGAGAGACCTGGAGACCTGTGAC 1874  
 Db 2909 GAGAAAGACTCTTAAGTTCAGAGTTCGCTCCATCCAGAGAGAGACCTGGAGAACCTGTGAC 2968  
 QY 1875 CGACTACTGGCAGGACCTGATTCGCCAGTGGGAGTGTGTAACACCCCTCCCTGCT 1934  
 Db 2969 AGAGTATGGCAGGACCTGATTCGTAAGTGGAGTGTGTAACACCCCTCCCTGCT 3028  
 QY 1935 GAAGCTGTGTACCACTGAGAGAGAGCCCATCATCGGCGCGAGACTTCTACAGTGA 1994  
 Db 3029 GAAGCTGTGTACCACTGAGAGAGAGCCCATCATGTGGCGCGCGAGAACTTCTACAGTGA 3088  
 QY 1995 CGGCGCGCCCAAGCGAGACCAAGATCGGCAAGCGCGCTACGTGAACCGAGCGGCG 2054  
 Db 3089 TGGGCGCGCTTAAGAGAGACTGAAGTGGGCAAGCGGATGATCACTAACCGGCGAG 3148  
 QY 2055 GCGAGAGATCGTGAAGCTGACCGAGACCAACCAAGAGAGAGAGAGAGAGAGAGAG 2114  
 Db 3149 ACGAGAGAGTGTGACCTGACCTGACCGAGACCAACCAAGAGAGAGAGAGAGAGAGAG 3208  
 QY 2115 GCTGGCCCTGAGAGACGCGGAGAGAGTGAACATCGTGAACCGAGAGAGAGAGAGAG 2174  
 Db 3209 CCGTGTGTGAG 3268  
 QY 2175 GCGCATCATCAAGGCGCCAGCCGACCAAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2234  
 Db 3269 GCGCATCATCAAGGCGCCAGCCGACCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 3328  
 QY 2235 GCGAGTGAATCAAG 2294  
 Db 3329 GCGAGTGAATCAAG 3388  
 QY 2295 CCGCAACGAGAGATGACAGAGTGTGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2354  
 Db 3389 CCGCAATGAGAGAGAGTGAACAGAGTGTGCGGTGAGAGAGAGAGAGAGAGAGAGAG 3448  
 QY 2355 CCGCATCGA 2363  
 Db 3449 TGGCATCGA 3457

RESULT 2  
 US-09-552-950-5  
 ; Sequence 5, Application US/09552950  
 ; Patent No. 6541248  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Oxford Biomedica (UK) Limited  
 ; TITLE OF INVENTION: Anti-Viral Vectors  
 ; FILE REFERENCE: 674524-2004  
 ; CURRENT APPLICATION NUMBER: US/09/552, 950  
 ; CURRENT FILING DATE: 2000-04-20

; NUMBER OF SEQ ID NOS: 22  
; SOFTWARE: PatentIn Ver. 2.1

; SEQ ID NO 5

; LENGTH: 9772

; TYPE: DNA

; ORGANISM: Artificial Sequence

; FEATURE:

; OTHER INFORMATION: Description of Artificial Sequence:psvNPG

US-09-552-950-5

Query Match 66.0%; Score 1624.6; DB 4; Length 9772;

Best Local Similarity 81.8%; Pred. No. 4.3e-258;

Matches 1922; Conservative 0; Mismatches 408; Indels 19; Gaps 4;

QY	33	GGCCACAGGGCAACATCTGTATGAGCGCAGCAACATTCAGGGCCCCCAAGCGATCAT	92
DB	2217	GACCAATCGGTACCATCATGATGAGCGCGCAACTTTCGGAAACCAAGCGAAGATCGT	2276
QY	93	CAAGTGCTTCAACTCGGCAAGGAGGCGCACATCGCCCGCAACTGCGGCGCCCGCCGCAA	152
DB	2277	CAAGTGCTTCAACTGTGGCAAGAGGCGCACAGCCCGCACTGAGGGCCCTTAGGAA	2336
QY	153	GAAAGGCTGCTGAAGTGGCGCAAGGAGGCGCCACAGATGAAGACTGCAACGAGCGCCA	212
DB	2337	AAAAGGCTGTTGAAATGTGAAAGGAAGGACACCAAAATGAAAGATTGTACTGAGAGCA	2396
QY	213	GGCCAACTTCTCCGGAGGACCTGGCTTCCCGCAGGCGAAGCGCGAGTTCCCGAG	272
DB	2397	GGCTAA-TTTTTATAGGAAGATCTGGCTTCCCGCAAGGGAAGCGCAGGGAAATTTCTTC	2455
QY	273	CGAGCAGAACCGGCGCAACAGCCCGCCACAGCGCGAGTCTCAGGTGCGGG-----CGA	326
DB	2456	AGAGCAGACAGAGCCAAAGCCCGCCACAGAGAGCTTCAGGTTTGGGAGAGACAA	2515
QY	327	CAACCCCGGAGCGAGCGCGCGCGAGCGCCAGGCA-----CCCTGAATTCGCCCA	380
DB	2516	CAACTCCCTCTCAGAGCAGAGCGCGATAGACAAGGAATGTATCTTTAGTTCCCTCA	2575
QY	381	GATCACCTGTGACAGGCGCCCTGTGTGACATCAAGTGGGCGCGCAGATCAAGAGGC	440
DB	2576	GATCACTCTTTGACAGCGACCCCTCTGTCACATAAAGATAGGGGGCGAGCTCAAGAGGC	2635
QY	441	CTGTCTGGACACCGGCGCCAGACACCGTGTGTGGAGAGATGAGCTGCGCGGCAAGTG	500
DB	2636	TCTCTCTGGACACCGGAGCAGACACCGTGTGTGGAGAGATGTGTTGCCAGCGCGTG	2695
QY	501	GAAAGCCAAAGATGATCGGCGCATCGCGGCTTCAACAAGTGGCGAGTACACAGAT	560
DB	2696	GAAAGCCAAAGATGATCGGCGCATCGCGGCTTCAACAAGTGGCGAGTATGACAGAT	2755
QY	561	CCTGATCGAGATCTGGGCAAGAGCGCATCGGCACCGTCTGATCGGCGCCACCCCGT	620
DB	2756	CCTCATCGAAATCTGGGCGCACAGGATATCGGTACCGTCTGTGGGCGCCACACCGT	2815
QY	621	GAAATCATCGGCGCAACATGTGACCCAGCTGGGTGACACCTGAATTTCCCATCAG	680
DB	2816	CAATCATCGAGCGCAACCTGTGTGACGAGATCGGTTGACGCTGAATTTCCCATTAG	2875
QY	681	CCCCTATCGAGACCGTGCCTGTGAAGTGAAGCCCGGATGAGCGGCCCAAGGTGAAGCA	740
DB	2876	CCCTATCGAGACGTTACCGGTGAAGTGAAGCCCGGATGAGCGGCCCGGAGGTCAAGCA	2935
QY	741	GTGGCCCTTACCGAGAGAGATCAAGGCGCTTGACCGCCATCTGGAGAGATGAGAA	800
DB	2936	ATGGCCATTTACAGAGAGAGAGATCAAGGCACTGGTGGAGATTTGACAGAGATGAAAA	2995
QY	801	GGAGGCAAGATCACCAAGATCGGCCCGGAGACCCCTTACACACCCCGTGTCCCAT	860
DB	2996	GGAGGCAAGATTTCCCAAGATTGGGCTTGAGACCCCTTACACACCCCGTGTTCGAAT	3055
QY	861	CAAGAGAGAGCAGACACCAAGTGGCGCAAGCTGGTGAATTCGCGAGCTGAACAGCG	920
DB	3056	CAAGAGAGAGCTCGACGAATGGCGCAAGCTGGTGAATTCGCGAGCTGAACAGCG	3115

QY	921	CACCCAGAGACTTCTCGGAGGTGCAGCTGGGCATCCCGACCGCGCGCTGAAGAGAA	980
DB	3116	CACGCAAGACTTCTCGGAGGTTCAGCTGGGCATCCCGACCGCGAGGGCTGAAGAGAA	3175
QY	981	GAAAGAGCTGACCGTCTCGTGGAGCTGGGGAGCCCTACTTTCAGCTGCGCCCTGACGAGCA	1040
DB	3176	GAAATCCGTGACCGTACTGATGTGGTGTGATGCTTCTCGTTCCTCGTGGAGCAAGA	3235
QY	1041	CTTCCGCAAGTACACCGCTTTCACCATCCCGAGCATCAACAGAGACCCCGCGGATCCG	1100
DB	3236	CTTCCGCAAGTACACTGCTTTCACCAATCCCTTCGATCAACAGAGACCCCGGGATTCG	3295
QY	1101	CTACAGTACAACTGCTGCCCGGCTGGAAGGCGACCCAGCATCTTCCNAGAGCAG	1160
DB	3296	ATATCAGTACAACTGCTGCCCGGCTGGAAGGCTTCCCGCAATTTCCAGAGTAG	3355
QY	1161	CATGACCAAGATCTCGGAGCCCTTCCGCGCCGCAACCCCGAGATCGTATCTACCA---	1217
DB	3356	CATGACCAAAATCTCGGAGCTTTCCGCAAAACAGAACCCCGACATCGTCTATCAGTA	3415
QY	1218	----GGCCCCCTGTACTGTTGGGAGCGAATCTGAGATCGGCGCAGCACCGCGCGAAGATCGA	1274
DB	3416	CATGATGACTTGTACTGTTGGGCTCTGATCTAGAGATAGGGCGACACCGCACCAAGATCGA	3475
QY	1275	GGAGCTGCGCAAGCACCTGCTGGCTGGGCTTCCACCCCGCAACAGAACCCAGAA	1334
DB	3476	GGAGCTGCGCCAGCACCTGTTGAGTGGGACTGACACACCCGCAAGAGACCCAGAA	3535
QY	1335	GGAGCCCCCTTCTGTGTGATGGGTACAGCTGACCCCGCAACAGTGGACCGTGCAGCC	1394
DB	3536	GGAGCTCCCTTCTGTGATGGTTACGAGCTGCACCTGCACAAATGACCGTGCAGCC	3595
QY	1395	CATCGAGCTGCCGAGAGAGAGCTGACCGTGAACGATCCAGAACCTGTTGGGCAA	1454
DB	3596	TATCTGTCTGCCAGAGAAAGACGCTGACTCTCAACGACATACAGAACTGTTGGGAA	3655
QY	1455	GTGTAATCTGGGCGAGCTGATCTACCCCGGCTCAAGGTGCGCGAGCTGTGCAAGTCTGT	1514
DB	3656	GTGTAATCTGGGCGAGTCAATTTACCCAGGATTAAGTGTAGGAGCTGTGCAAACTCT	3715
QY	1515	GGCGGCGCAAGGCGCTGACCGACATCGTGCCTCTGACCGAGGAGCGCGAGCTGAGCT	1574
DB	3716	CCGCGGAACCAAGGCACTCAGAGGTGATCCCTTAACCGAGGAGCGCGAGCTCGAAT	3775
QY	1575	GGCGGAGAACCGCGAGATCTCGCGAGCCCGTGCACGGGCTGTACTAGACCCAGCAA	1634
DB	3776	GGCAGAAACCGAGAGATCTTAAAGGAGCCCGTGCACGGCGTGTACTATGACCCCTCAA	3835
QY	1635	GGACCTGTGGCGGAGATCCAGAGCGAGGCGCACAGCTGAGTGGACCTTACAGATCTACCA	1694
DB	3836	GGACCTGTGTCGCGAGATCCAGAGCGAGGCGAAGCCAGTGGACCTTACAGATTACCA	3895
QY	1695	GGAGCCCTTCAAGAACCTGAAGACCGGCAAGTACGCAAGATGCGCACCGCCCGCACCAA	1754
DB	3896	GGAGCCCTTCAAGAACCTGAAGACCGGCAAGTACGCGCCGATGAGGGGTGCCACACTAA	3955
QY	1755	CGAGCTGAAGCGAGTGAACCGAGCGCGTGCAGAGATCGGCAATGGAGAGATCGTGTCTG	1814
DB	3956	CGAGCTGAAGCGAGTGAACCGAGCGCGTGCAGAGATCAACCCGAAAGCATCTGTATCTG	4015
QY	1815	GGCGAGACCCCGAGTTCGCGCTCCCATCCAGAGGAGACCTGGAGACCTGTGGTGGAC	1874
DB	4016	GGGAAAGACTCTCAAGTTCAGCTGCCCATCCAGAGGAAACCTGGGAAACCTGTGGTGGAC	4075
QY	1875	GCATCTACTGGCGGCGCACCTGATCCCGAGTGGGAGTTCTGTAAACACCCCGCCCTGGT	1934
DB	4076	AGAGTATTGGCGAGCCACCTGATTCCTGAGTGGGAGTTCTGTCAACACCCCTCCCTGGT	4135
QY	1935	GAGCTGTGTTCCAGCTGGAGAGAGCCCATCATTCGCGCGCGAGACCTTCTTACGTGGA	1994
DB	4136	GAGCTGTGTTCCAGCTGGAGAGAGCCCATATGTGGGCGCGCAACCTTCTTACGTGGA	4195

QY 1995 CGGCGCCGCAACCCGCGAGACCAAGATCGGCAAGCGCGCTACGTACCGACCGGCGCG 2054  
 Db TGGGGCCGCTAACAGGGAGACTAAGCTGGGCAAGCCGATACGTCACTAACCGGGGCGAG 4255  
 QY 2055 GAGAAAGATCGTGAGCCTGACCGAGACCAACCAAGAGACCGAGCTGCAAGCCATCCA 2114  
 Db 4256 AAGAAGGCTTGACCCCTCACTGACACCAACCAAGAGAGACTGAGCTGCAAGCCATTTA 4315  
 QY 2115 GCTGACCCCTGACAGACGAGCGGAGGTGAACCTGAGACCGGACGAGCGAGTACGCCCT 2174  
 Db 4316 CCGCTCTTGACGAGCTCGGCGCTTGAGGTGAACCTGAGACGCTCTCGATATGCTCT 4375  
 QY 2175 GGGGATCATCAAGGCCACGCGGCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2234  
 Db 4376 GGGGATCATCAAGGCCACGCGGCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 4435  
 QY 2235 GAGCTGATCAAG 2294  
 Db 4436 GAGCTGATCAAG 4495  
 QY 2295 CGGCAACGAGAGATCGACCAAGCTGTGAGCAAGGAGATCGGACGAGTGTGCTTCTGGA 2354  
 Db 4496 CGGCAATGAG 4555  
 QY 2355 CGGATCGA 2363  
 Db 4556 TGGCATCGA 4564

RESULT 3  
 US-09-184-418C-8  
 ; Sequence 8, Application US/09184418C  
 ; Patent No. 6492110  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Hahn, Beatrice  
 ; APPLICANT: Gao, Reng  
 ; APPLICANT: Shaw, George  
 ; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN  
 ; TITLE OF INVENTION: IMMUNODEFICIENCY VIRUS TYPE 1  
 ; FILE REFERENCE: D6287  
 ; CURRENT APPLICATION NUMBER: US/09/184,418C  
 ; NUMBER OF SEQ ID NOS: 112  
 ; SEQ ID NO 8  
 ; LENGTH: 9010  
 ; TYPE: DNA  
 ; ORGANISM: Human immunodeficiency virus type 1  
 ; FEATURE:  
 ; OTHER INFORMATION: Isolate=962M651; 137..1621:"gag"; 1426..4425:"pol";  
 ; OTHER INFORMATION: 4370..4948:"vif"; 4888..5178:"vpr";  
 ; OTHER INFORMATION: 5159..5373-7734:"tat"; 5298..5373-7734..7981:"rev";  
 ; OTHER INFORMATION: 5387..5647:"vpu"; 5565..8171:"env"; 8173..8793:"nef"  
 ; US-09-184-418C-8

Query Match 48.9%; Score 1203.6; DB 4; Length 9010;  
 Best Local Similarity 70.0%; Pred. No. 4e-189;  
 Matches 1650; Conservative 0; Mismatches 699; Indels 7; Gaps 2;  
 QY 14 TGGCGAGGCGCATGAGCGGCGACCGGCGCAACATCTGATCGAGCGCAACTTCA 73  
 Db 1221 TGGCGAGGCGCATGAGCGGCGACCAATCTGTAACATCTGATCGAGGAGGCAATTTTA 1280  
 QY 74 AGGCGCCCAAGCGCATCATCAAGTCTTCACTGCGGCAAGAGGCGGCAATCCCGCGCA 133  
 Db 1281 AAGGAATTAAGAAATGATGTTAAATGTTTAACTGTGGTAAGAGAGGCACTATCCGAGAA 1340  
 QY 134 ACTGCGCGCGCGCGCGCGAGAGAGGCTGCTGGAAGTGGCGGAAAGAGGCGGCAATGTA 193  
 Db 1341 ATTGCAAGGCGCGCGCGAGAGAGAGGCTGTTGGAATGTGGAAGAGAGGAGACCAAAATGA 1400  
 QY 194 AGAGCTGACCGAGCGCGGCGCAACTTCTTCCGCGAGGAGCTTGGCTTCCCGAGGGA 253  
 Db 1401 AAGACTGTACTGAGAGAGGCTTAA-TTTTAAAGGAAATTTGGCTTCCCGAGGGA 1459

QY 254 AGGCGCGGAGTTCGCCAGGAGAGAGAAACCGCGGCAACAGCGCCACCGGCGAGCTGC 313  
 Db 1460 AGGCGCGGAGTTCCTTCAGAACAGGCGGAGGCAACAGCGCCACCGGCGAGAGGCTTC 1519  
 QY 314 AGTGGCGGCGGCAACCGCGGCGAGAGGCGGCGGCGGAGAGAGAGAGAGAGAGAGAGAG 373  
 Db 1520 AGGTTCCAG 1579  
 QY 374 TCCCCAGATCACCTGTGGAGAGCGCCCTGTGAGACATCAAGTGGCGGCGGAGATCA 433  
 Db 1580 TCCCTCAATACCTTCTTGGAG 1639  
 QY 434 AGAGAGCGCTGTGAG 493  
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 QY 494 GCAAGTGAAGAGCGGAGATGATCGGCGGAGATCGGCGGCTTCATCAAGTGGCGGAGTACG 553  
 Db 1700 GCAATGGAAG 1759  
 QY 554 ACCAGATCTGATGAGATCTGCGGCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 613  
 Db 1760 ATCAATATCCTATGAG 1819  
 QY 614 CCCCCGTAACATGAGCGGCGGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 673  
 Db 1820 CACTGTCAACATATTTGAAG 1879  
 QY 674 CCATGACCCCATGAG 733  
 Db 1880 CAATTAATCCTATTTGAAG 1939  
 QY 734 TGAAGCGTGGCGGCTGAG 793  
 Db 1940 TTAAACATGCGCATTCAG 1999  
 QY 794 TGGAG 853  
 Db 2000 TGGAG 2059  
 QY 854 TCGCATCAAG 913  
 Db 2060 TTGGCATTAAG 2119  
 QY 914 ACAAGCGACCCAGAGCTTCTGAGAGTGTGAGCTGGGAGATCCCGAGCGGCGCTGA 973  
 Db 2120 ATAAAGACTCAAGACTTCTTGGAGAGTTCATATTAGAGATACACACCGAGAGGATTAA 2179  
 QY 974 AGAAG 1033  
 Db 2180 AAAAG 2239  
 QY 1034 ACAGAGACTTCGCAAGTACAGCGGCTTCACATCCAGAGATCAACAGAGAGAGAGAGAG 1093  
 Db 2240 ATGAAAG 2299  
 QY 1094 GCAATCGCTACGATACAGAGTGTGCGGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 1153  
 Db 2300 GGAATGATATCAATTAAGTGTCTTCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2359  
 QY 1154 AGAGAGAGATGACCAAGATCTTGGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 1213  
 Db 2360 AGAGTGCATGACCAAAATTTTGAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2419  
 QY 1214 ACCA-----GCGCGGCTGTACGTGGGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 1267  
 Db 2420 ATCAATATATGATGAG 2479  
 QY 1268 AGATGAG 1327  
 Db 2480 AAATGAG 2539





QY 656 GCTGCACTTGAACCTCCCATCAGCCCATGAGACCGTGCCTGTGAGCTGAAGCCCG 715  
 Db 1873 GCTGCACTAAATTTTCCATTAGTCTATGAAACGTACCACTAAATTAAGCCAG 1932  
 QY 716 GCATGAGAGGCCCCAAGGTGAAGCAGTGGCCCTTACCGAGAGAAAGTCAAGGCCCTGA 775  
 Db 1933 GAATGAGAGGCCCCAAGGTGAAGCAGTGGCCCTTACCGAGAGAAAGTCAAGGCCCTGA 1992  
 QY 776 CCGCATCTGCGAGAGAGATGGAAGAGAGAGAGATCAACCAAGATCGGCCCGGAGAGAC 835  
 Db 1993 CAGCAATTTGTGAAGAAATGGAAGAGAGAGAAATTAACAAATTTGGCCCTGGAATC 2052  
 QY 836 CCAACAAACACCCCGCTGTTCGCATCAAGAAAGAGAGAGAGAGAGAGAGAGAGAGAG 895  
 Db 2053 CATATTAACACTCCAGTATTTTGCATTAAGAAAGAGAGAGAGAGAGAGAGAGAGAGAG 2112  
 QY 896 TGGACTTCCGAGAGTGAACAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 955  
 Db 2113 TAGATTTCAAGGAACTCATTAAGAAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2172  
 QY 956 CCCACCCCGCGCGCTGTAAG 1015  
 Db 2173 CACACCCAGCGGGGTAAAGAAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2232  
 QY 1016 ACTTCAAGCTGCGCTGAG 1075  
 Db 2233 ATTTTCAAGCTGCTTGTAGATGAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2292  
 QY 1076 TCACAAAG 1135  
 Db 2293 TAAACAAAG 2352  
 QY 1136 GCAG 1195  
 Db 2353 GATCAACATCAATTTCCAG 2412  
 QY 1196 ACCCGAGAGCTGATCTCAACA-----GCCCGCTGTGAGTGGAGAGAGAGAGAGAG 1249  
 Db 2413 ACCAG 2472  
 QY 1250 TCGGCGAG 1309  
 Db 2473 TAGGCGAG 2532  
 QY 1310 CCACCCCGAG 1369  
 Db 2533 CTAACAG 2592  
 QY 1370 ACCCGAG 1429  
 Db 2593 ATCTGAG 2652  
 QY 1430 ACAGCATCCAG 1489  
 Db 2653 ATGATATACAG 2711  
 QY 1490 AGGTGCGCGAG 1549  
 Db 2712 AAGTGAAG 2771  
 QY 1550 TGAACGAG 1609  
 Db 2772 TGAATGAAG 2831  
 QY 1610 ACAGCGATGATCTAG 1669  
 Db 2832 ATGAGATATATTAAG 2891  
 QY 1670 ACCAGTGAAG 1729  
 Db 2892 ACCAGTGAAG 2951  
 QY 1730 CCAAGATGAAG 1789

Db 2952 CAAGAAATGAG 3011  
 QY 1790 TCGCATGAG 1849  
 Db 3012 TAGCCATGAG 3071  
 QY 1850 AG 1909  
 Db 3072 AAG 3131  
 QY 1910 AGTTGTGAACACCCCGCTGTGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 1969  
 Db 3132 AGTTGTGAADACTCCCCCTGTGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 3191  
 QY 1970 TCGGCGCGAG 2029  
 Db 3192 CAGGAG 3251  
 QY 2030 CCGGCTACGAG 2089  
 Db 3252 CAGGCTATGTTACTGAG 3311  
 QY 2090 AAG 2149  
 Db 3312 AAAAG 3371  
 QY 2150 TCGTGAACGAG 2209  
 Db 3372 TAGTGAAG 3431  
 QY 2210 GCGAGCTGATGAACAG 2269  
 Db 3432 CAGATATGATCAATCAATTAATTAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 3491  
 QY 2270 GGGTCCCGCCCAAG 2329  
 Db 3492 GGGTACAG 3551  
 QY 2330 GCATCCGAG 2384  
 Db 3552 GAATCAG 3586

## RESULT 5

US-09-184-418C-11

Sequence 11, Application US/09184418C

Patent No. 6492110

GENERAL INFORMATION:

APPLICANT: Hahn, Beatrice

APPLICANT: Gao, Feng

APPLICANT: Shaw, George

TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN

FILE REFERENCE: D6287

CURRENT APPLICATION NUMBER: US/09/184,418C

CURRENT FILING DATE: 1999-11-02

NUMBER OF SEQ ID NOS: 112

SEQ ID NO 11

LENGTH: 8959

TYPE: DNA

ORGANISM: Human immunodeficiency virus type 1

FEATURE:

OTHER INFORMATION: isolate=94IN416.104; 18.1613; "ggag";

OTHER INFORMATION: 1418.4428; "p01"; 4361.4839; "v1f"; 4879.5169; "vpr";

OTHER INFORMATION: 5150.7782; "cat"; 5289.7939; "rev"; 5378.5638; "vpu";

OTHER INFORMATION: 5556.8129; "env"; 8131.8754; "nef";

US-09-184-418C-11

Query Match 47.3%; Score 1165.4; DB 4; Length 8959;  
 Best local similarity 69.6%; Pred. No. 7.3e-183;  
 Matches 1640; Conservative 0; Mismatches 706; Indels 11; Gaps 4;

14 TGGCCGAGGCCATGAGCAGGCCACCAGCGCCCAACATCTCTGATGCGCGCAGCAACTTCA 73  
1216 TGGCTGAGGCAATGAGCAATCATAG---TAACTAATGATGCGAGAGGCAATTTA 1272  
74 AGGGCCCAAGCCCATCATCAAGTGTCTTAACTGCGGCAAGAGGGGCCACATCGCCGCA 133  
1273 AAGGCCCTAAAGAAATGTTTAAATGCTTCAACTGTGGCAAGGAAGGCCACATAGCCAGAA 1332  
134 ACTGCGCGGCCCCCGCAAGAGGGCTGCTGGAAGTGCGCACAGGAGGGGCCACCATGTA 193  
1333 ATTGCAAGGGCCCTAGAAAAGAGGCTGTTGGAATGTGGGCAAGAGGACACCAATGA 1392  
194 AGGACTGCAACCGAGCGCCAGGCCAACTTCTTCGCGAGGACCTGGCTTCCGCCAGGGCA 253  
1393 AAGACTGTACTGAGAGGCAGGCTAA-TTTTATAGGGAATTTGGCTTCCCAAGGGG 1451  
254 AGGCCGCGAGTTCCCGAGCGAGCAGNAACCGCGCGCAACAGCCCAACAGCGCGGAGCTGC 313  
1452 AGGCCAGGGGAATTTCTTCAAAAACAGGCCAGAGCCCAACAGCCCCACACAGCAGAGAGCTTC 1511  
314 AGGTGCGCGCGCAACCCCGCAGCGAGGCGCGCGCCGAGCGCCAGGGCACCTCGAAT 373  
1512 AGSTTCAAGAGACAAACCCCGCTCGAAGCAGAGTCTGAAACAGAGGAACCTTTAACT 1571  
374 TCCCCAGATFACCTGTGSCAGCGCCCTGCTGTGAGCATCAAGTGGCGGCGCAGATCA 433  
1572 TCCCTCAATCACTTTTGGCAGCGCCCTTGTCTCAATAAAGTAGGGGGCCAGATAA 1631  
434 AGGAGCCCTGTGGAACCGCGGCGCAACGACACCTGTGTGAGAGATGAGCCTGCCG 493  
1632 AGGAAGCTCTTTAGACACAGAGGACAGATGATACAGTATTAGGAAGAAATAGCTTTGCCAG 1691  
494 GCAAGTGGGAAGCCCAAGATGATCGCGGGCATCGCGGCTTTCATCAAGGTGCGCCAGTACG 553  
1692 GAAGATGGAACCAAAATGATAGAGGAATTCGAGSTTTTATCAAAATGACAGATG 1751  
554 ACCAGATCTGTGATCGAGATCTGCGCAAGAGGCCATCGGCACCGTCTGATCGGCCCA 613  
1752 ATCAATACTTTATAGAAATTTTGGGAAAAGGCTATAGTACAGTATTAGTAGGACCTA 1811  
614 CCCCCTGAACTATCGGCGGCAACATGCTGACCAAGTGGCTGAGCCTGAACTTCC 673  
1812 CACCTGTCAACATAATTGGAAGAGATATGTTGACTCAGCTTGGATGCACTCTAAATTTTC 1871  
674 CCATCAGCCCATCGAGACGCTCCGCTGAAGCTGAAGCCCGCATGGAGCGGCCCAAGG 733  
1872 CAATTAGCCCCATGAACTGTACAGTAATAATTAAGCCAGGAATGGATGGCCCCAAGG 1931  
734 TGAAGCAGTGGCCCTGAOCGAGGAGAGATCAAGGCCCTGACCGCCATCTGCGAGGAGA 793  
1932 TTAACACAGTGGCCATTGACAGAGAGAGAAAATAAAGCAATTAACAGAAAATTTGTAAGAAA 1991  
794 TGGAGAGAGGCGCAGATACCAAGATCGGCCCGCGAGAACCCCTACACACCCCCGCTGT 853  
1992 TGAGAGAGAGAGGAAAAATTAACAAAATTTGGGCTGAAAATCCATATAACACTCCAGTAT 2051  
854 TGGCCATCAAGAGAGGACGACCAAGTGGCGCAAGCTGGTGGACTTCGCGAGCTGA 913  
2052 TTGGCCATAAAGAGAGGACAGTACTAAGTGGAGAAAATTAGTAGATTTTCAGGAGCTCA 2111  
914 ACAAGCGCCACCGAGACTTCTGGGAGGTGCAGTGGGCGATCCCCACCCCGCGGCTGA 973  
2112 ATAAAAAGAACTCAAGACTTTTGGGAAGTTCAATTAGGAATACCACACCCAGCAGGTTTAA 2171  
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2172 AAAAGAAAAATCAGTGACAGTACTGGATGTGGGGGATGCATATTTTTCAGTTCCTTTAG 2231  
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2292 GGTATAGATATCAATATATATGCTTCCACAGGATGGAAGATCACACAGCATATTCC 2351  
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2532 ATCAGAAAGAACCCCAATTTCTTGGATGGGTATGAATCCATCTGCAAAATGACAG 2591  
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2592 TACAGCTTAAAGCTGCGAGAAAGGATGCTGGACTGTCAATGATATACAGAACTTAG 2651  
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2712 AACTCTTTAGGGGGGCCAAAGCACATAACAGACATAGTACCACTAACTGAAGAAGCAGAAT 2771  
1568 TGGAGTGCOCGAGAACCGCAGAGATCTCTGCGGAGCCCTGCGACGCGTGTACTACGACC 1627  
2772 TGAATTTAGCAGAGAACAGGGAATTTCTAAAGAGCCAGTATGAGATATATTATGACC 2831  
1628 CCAGCAAGCACTGGTGGCCGAGATCCAGAAGCAGGGCCACGACCACTAGTGGACCTACAGA 1687  
2832 CATCAAAAGACTTAATAGCTGAATACAGAAACAGGGGCATGACCAATGACATATCAA 2891  
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2892 TTTACCAAGAACCAATTCAAAAATCTGAAAAACAGGGAAGTATGCAAAAATGAGACTGCTC 2951  
1748 ACACCAAGACGCTGAAGCAGCTGACCGAGGCGCTGAGAGATCCCATGAGAGCATCG 1807  
2952 ACCTAATGATGATAAACHAGTTTACAGAGGCGAGTGCAAAAAATAGCCATAGAAAGCATAG 3011  
1808 TGATCTGGGGCAAGACCCCAAGTTCCGCTTCCCATCCAGAAAGAGACCTGGGAGACCT 1867  
3012 TAAATAT-GGGAAGACCCCTAAATTTAGACTACCCATCCAAAAAGAAACGTGGAGACAT 3070  
1868 GGTGACCGACTACTTGGCAGGCGCACTTGGATCCCGAGTGGGAGTTCGTAACACCCCC 1927  
3071 GGTGACAGACTATTGGCAGGCGCACTGGATTCCTGATTGGGAGTTTGTAAATACCCCTC 3130  
1928 CCTCGTGAAGCTGTGTACACAGCTGGAGAGAGCCCATCATCGCGCCGAGACCTTCT 1987  
3131 CCTTAGTAAATTTAGTACCACTAGAAAAGAACCCCATAGTAGAGCAGAAAATTTTCT 3190  
1988 ACCTGGACGGGCGCCCAACCGCAGAGCAAGATCGCAAGGCCCGGTACTCGTGAACCGACC 2047  
3191 ATGTAGATGGAGCAGCTAATAGGGAACCTAAAGTAGGAAAAACGAGGTATGTACTGACA 3250  
2048 GGGGCGGCGAGAGATCTGTAGCCTGACCGAGACCAACCAACAGAAAGCCGAGCTGCAGG 2107  
3251 GAGGAAGGCAGAAAAATTTGTTCTTTAACTGAAAACAACAATCAGAAGACTGAAATGCAAG 3310  
2108 CCATCCAGCTGCGCTTCAGAGACCGCGCAGGAGTGAATCGTGACCGACAGCCAGT 2167  
3311 CAATTCAGTACTTTTGAAGATTCAGGAACAGAAAGTAAACATAGTAAACAGACTCACAGT 3370  
2168 AGCCCTCGGCATCATCCAGGCCCGCCAGCAAGAGCGAGAGCTGGTGGTGAACCCAGA 2227

Db 3371 ATGCAATTAAGATCATTCATCAAGCAACAAGATTAAGTATGATCAACCA 3430  
 QY 2228 TCATGAGACGCTGATCAAGGAAGGTGATGCTGGGCGCCCGCCACAGG 2287  
 Db 3431 TAATGAAACAATTAATTAACAAAGAAAGAGTCTATCTGTGATGGGTAACAGACATTAAG 3490  
 QY 2288 GCATGCGCGGCAACGACGATCGAACAAGCTGTGAGCAAGGGCATCCGCAAGTGTCTG 2347  
 Db 3491 GAATGAGAGGAATGAACAAGATAGATAGTATAGTATAGTGAATTTGAAAGTACTGT 3550  
 QY 2348 TCCTGAGCGCATTCAT 2364  
 Db 3551 TTCTAGATGGATAGAT 3567

## RESULT 6

US-09-184-418C-4  
 / Sequence 4, Application US/09184418C  
 / Patent No. 6492110  
 / GENERAL INFORMATION:  
 / APPLICANT: Hahn, Beatrice  
 / APPLICANT: Gao, Peng  
 / APPLICANT: Shaw, George  
 / TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN  
 / FILE REFERENCE: D6287  
 / CURRENT APPLICATION NUMBER: US/09/184,418C  
 / CURRENT FILING DATE: 1999-11-02  
 / NUMBER OF SEQ ID NOS: 112  
 / SEQ ID NO 4  
 / LENGTH: 8992  
 / TYPE: DNA  
 / ORGANISM: Human immunodeficiency virus type 1  
 / FEATURE:  
 / OTHER INFORMATION: Isolate=92RM09; 139,1624,gsd; 1690,4428,pol (N-terminus uncertain  
 / OTHER INFORMATION: 4573,4951,vlf; 4891,5181,vpr; 5162,7801,tat; 5301,7958,rev;  
 / OTHER INFORMATION: 5403,5648,vpu; 5566,8148,env; 8150,8773,nef  
 US-09-184-418C-4

Query Match 46.4%; Score 1142; DB 4; Length 8992;  
 Best Local Similarity 68.6%; Pred. No. 4,9e-179;  
 Matches 1620; Conservative 0; Mismatches 730; Indels 10; Gaps 3;

QY 14 TGGCCGAGGCGCATGAGCGCCACGCGCCACATCTGTATGCGAGCGCACTTCA 73  
 Db 1221 TGGCTGAAGCAATGAGCGCAAGTACAAACCAATATGATGCAAGAGGCAATTTTA 1280  
 QY 74 AGGGCCCCAAGCGCATCTCAAGTCTTCACTGGGGAAGAGGCCACATCGCCGCA 133  
 Db 1281 AGGGCCAGAGAAATTTTAAGTGTTCACCTGTGGCAAGAAAGACACCTAGCCAGAA 1340  
 QY 134 ACTGCGCGCGCCCGCGAAGAGGCTGTGGAATGCGGCAAGAGGGCCACAGATGA 193  
 Db 1341 ATTGAGAGGCCCTTGAAAGAAAGGCTGTGGAATGCGGAAAGAGGACACCAATGA 1400  
 QY 194 AGGACTGCAACGAGCGCGCAACTTCTTCCGCGAGGACCTGTGCTTCCCGAGGCA 253  
 Db 1401 AAGACTGCACTGAGAGCAGGCTAA-TTTTATAGGAAATTTGGCTTCCAAACAAGGG 1459  
 QY 254 AGGCGCGGAGTTCCTCCGACGAGCAACCGCCCAACAGCCCGCCAGCGGAGCT-- 311  
 Db 1460 AGGCGAGAAATTTTCCCGAGAGCACTGAGGCGCAACAGCCCGCCAGCGAGAACTTT 1519  
 QY 312 -GCAGTGCAGCGAGCAACCCCGACGAGGCGCGGCGCGAGGCGCGAGGCAACCTGCA 370  
 Db 1520 GGAATGGGGGAAGAGATAGCTCTCTCTGAAACAGAGCAAGAAAGACAGGAACTTTA 1579  
 QY 371 ACTTCCCGCAGATCACTCTGTGGCAAGCGCCCTGTGTGAGCATCAAGTGGAGCGCGCA 430  
 Db 1580 ATTTCCTCAATCACTCTTGGCAAGACCCCTTGTCAAGTAAATATAGAGGTGAGC 1639  
 QY 431 TCAGAGAGCCCTGTGTGACACCGGCGCGGAGCAACCGTGTGTGAGAGATGAGCTGC 490

Db 1640 TAAGAGAGCTCTATAGATACAGAGACGATGATACATATAGAAATAATTTGC 1699  
 QY 491 CCGGCAAGTGAACCCCAAGTATCGCGGCAATCGCGGCTTATCAAGTGGCCAGT 550  
 Db 1700 CAGAAATGAAACCAAAATGATAGGGGAAATGAGGTTTATCAAGGTAAACAGT 1759  
 QY 551 ACAGCAAGATCTGATGAGATCTGCGCAAGAGGCGCATCGGACCGGTGTATCGGCC 610  
 Db 1760 ATGATCAAAATCTTATAGAAATTTGTGAAAAAAGGCTATAGTACATTTATAGGAGC 1819  
 QY 611 CCACCCCGTGAACATCATCGGCCCAACATGCTGAACCACTGGCTGGCAACCTGAACT 670  
 Db 1820 CTACATCTGTCAATATTAAGAAATATGTGACCCAGATTGGTTGTACTTAAACT 1879  
 QY 671 TCCCATACGCCCATGAGACCTGCGCCGTGAAGCTGAAGCCCGCATGAGCGGCCCA 730  
 Db 1880 TTCCAAATTAATCTTATGAGAGCTGTACACAGTATTAAGCCAGAGATGATGCGCCA 1939  
 QY 731 AGGTGAAGCAGTGGCCCTGACCGAGGAGAAGATCAAGGCCCTGACCGCATCTGCGAG 790  
 Db 1940 AGGTAAACATGGCCATTTGACAGAGAAAAAATTAAGCATTAAGAAATTTGTACAG 1999  
 QY 791 AGATGGAAGAGAGGCGCAAGATCAAGATCGGCCCGGAGAACCCCTACACACCCCG 850  
 Db 2000 AATGGAAGAAAGAGGGAATAATTTCAAAATCGGCGCTGAAATCCATATTAACATCCAG 2059  
 QY 851 TGTTCGCATCAAGAAAGAGACGACCAAGTGGCGCAAGCTGTGATCTTCGCGAGC 910  
 Db 2060 TATTTGCCATTAAGAAAGAGGACAGTACTAAGTGAAGAAATTAAGTGAATTTGAGGAA 2119  
 QY 911 TGAACAGCGCACCCAGACTCTTGGAGGTGACGTGGGATCCCCACCCCGCGGCGC 970  
 Db 2120 TCAACAAAAGACCTCAAGACTTTTGGGAATGTCATTAAGGATACACACCCAGCAGGT 2179  
 QY 971 TGAAGAAAGAGAGAGCGTGAACGCTGTGAACGTGGCGACGCTACTTCAAGTCGCC 1030  
 Db 2180 TAAAGAAAGAAATAATCAAGTACAGTACGTGATGCGGAGATGCACTACTTCTCAATCTCT 2239  
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 QY 1151 TCCAGAGACGATGACCAAGATCTGTGAGCCCTTCCGCGCCGCAACCCCGAATCTGTA 1210  
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 QY 1211 TCTACCA-----GGCCCTCTGACGTGGGCAAGCGACTGAGATGCGGCAGACCGCG 1264  
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 QY 1265 CAAAGATGAGAGAGCTGCGCAAGACCTGTGCGCTGGGGCTTACCAACCCCGACAGAA 1324  
 Db 2480 CAAAAATAGAGGAGTTAAGAAACATCTTAAGTGGGATTTACACACCAAGACAGA 2359  
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 Db 2600 CAGTACAACCTATATCAGCTGCGAAGAAAGATAGCTGATCTCAATATATACAGAGT 2659  
 QY 1445 TGTGGGCAAGCTGAAGTGGGCGCAAGCAATCTAACCCGCAATCAAGGTGCGCCAGCTGT 1504  
 Db 2660 TAGTGGAAATTAATTAAGTGGCAAGTCAATTTTACAGAGGATTAAGTAAAGCAATGT 2719  
 QY 1505 GCAAGCTGTGCGCGGCGCCAGGCGCTTACCGACATGTGTCCTGACCGAGAGAGCGCG 1564  
 Db 2720 GTAAATCTTTAGGGGAACCAAGCATTAACAGCATATGATCACTTAAGAAAGCAG 2779

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QY 1565 AGCTGAGTGGCGGAGAACCGGAGATCTCGCGAGCCCGTCCAGCGGCGTGTACTACG 1624
Db 2780 AATTAGAAATGGCAGAAACAGGGAATTTTAAAGAACCCAGTACATGAGTATATATG 2839
QY 1625 ACCCGACGAGGACCTGGTGGCGGAGATCAGAAAGCAGGCGCCAGCCAGTGTGACCTACC 1684
Db 2840 ACCCATCAAAAGACTTAATAGCTGAAATACAGAAACAGGGGATGACCAATGACATATC 2899
QY 1685 AGATCTACGAGGAGCCCTCAAGACTGAAGCTGAGACCGGAGTACGCAAGATCGCACCG 1744
Db 2900 AATTTACCAAGAACCATTCAAAATCTGAAAACAGAAAGTATGCAAAAGGAGACTG 2959
QY 1745 CCACACCAACGACGCTGAAGCAGCTGACCGAGGCGCTGAGAAAGATCGCCATCGGACGCA 1804
Db 2960 CCACACTAATGACGTAAACACTTACAGAGGCTGCAAAAGATAGCCATGGAAGCA 3019
QY 1805 TGTGATCTGGGCAAGACCCCAAGCTTCGCTGCTGCCATTCGAAAGGAGACTGGGAGA 1864
Db 3020 TAGTAATATGGGAAAGACTCTTAATTTAGATTACCCATCCAGAAAGAAACATGGGAAA 3079
QY 1865 CTGTGTGACCGACTACTGCGAGGCGACCTGGATCCCGAGTGGGAGTTCTGTAACACCC 1924
Db 3080 CATGTGGACAGACTATTGGCAAGCCACCTGGATTCTGAGTGGGAGTTGTTAATACCC 3139
QY 1925 CCCCCCTGTGAGCTGTGTACGCTGAGAAAGGAGCCCATCATCGGCGCGGAGACCT 1984
Db 3140 CTCCTCTAGTAAATTTATGTTACCTAGCTAGAGAAAGAACCCATATTAGGACAGACTT 3199
QY 1985 TCTAGTGAACGCGCGCCCAACCGGAGACCAAGATCGGCAAGCGCGCTAGTGAACG 2044
Db 3200 TCTATGTAGATGAGCAGCTAATCGGGAACCTAAATAGGAAAGCAGGCTATGTTACTG 3259
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## RESULT 7

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US-09-117-217-7
; Sequence 7, Application US/09117217
; Patent No. 6221578
; GENERAL INFORMATION:
; APPLICANT: de BETHUNE, Marie-Pierre
; APPLICANT: HERTOGS, Rudi
; APPLICANT: PAUWELS, Kurt
; TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE
; TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY
; TITLE OF INVENTION: OF HUMAN HIV STRAINS
; FILE REFERENCE: 1377-125P
; CURRENT APPLICATION NUMBER: US/09/117,217
; CURRENT FILING DATE: 1998-07-24
; NUMBER OF SEQ ID NOS: 15
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; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 7
; LENGTH: 2601
; TYPE: DNA
; ORGANISM: HIV-HXB2
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1)..(492)
; OTHER INFORMATION: gag Polyprotein
US-09-117-217-7
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Query Match 44.9%; Score 1106.8; DB 3; Length 2601;
Best Local Similarity 68.3%; Pred. No. 2.6e-173;
Matches 1598; Conservative 0; Mismatches 723; Indels 19; Gaps 4;
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QY 163 TGAAGTTCGGCAAGGAGGCGCCACAGATGAAGAGCTGCACCGAGCGCCAGGCCCAACTTC 222
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RESULT 8  
 US-09-117-217-9  
 ; Sequence 9, Application US/09117217  
 ; Patent No. 6221578  
 ; GENERAL INFORMATION:  
 ; APPLICANT: de BETHUNE, Marie-Pierre  
 ; APPLICANT: HERROG, Kurt  
 ; APPLICANT: PATHEIS, Rudi  
 ; TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE  
 ; TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY  
 ; FILE REFERENCE: 1377-125P  
 ; CURRENT APPLICATION NUMBER: US/09/117, 217  
 ; NUMBER OF SEQ ID NOS: 15  
 ; SOFTWARE: Patent In Ver. 2.0  
 ; SEQ ID NO 9  
 ; LENGTH: 2601  
 ; TYPE: DNA  
 ; ORGANISM: HIV-HXB2  
 ; FEATURE:  
 ; NAME/KEY: CDS  
 ; LOCATION: (334)..(489)  
 ; OTHER INFORMATION: gag.p6 (52 AA)  
 US-09-117-217-9

Query Match 44.9%; Score 1106.8; DB 3; Length 2601;  
 Best Local Similarity 68.3%; Pred. No. 2,6e-173;  
 Matches 1598; Conservative 0; Mismatches 723; Indels 19; Gaps 4;  
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RESULT 9

US-09-117-217-11

; Sequence 11, Application US/09117217

; Patent No. 6221578

; GENERAL INFORMATION:

; APPLICANT: de BETHUNE, Marie-Pierre

APPLICANT: HERTOGS, Kurt  
 APPLICANT: PAUMELS, Rudi  
 TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE  
 TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY  
 TITLE OF INVENTION: OF HUMAN HIV STRAINS  
 FILE REFERENCE: 1377-125P  
 CURRENT APPLICATION NUMBER: US/09/117,217  
 CURRENT FILING DATE: 1998-07-24  
 NUMBER OF SEQ ID NOS: 15  
 SOFTWARE: PatentIn Ver. 2.0  
 SEQ ID NO 11  
 LENGTH: 2601  
 TYPE: DNA  
 ORGANISM: HIV-HXB2  
 FEATURE:  
 NAME/KEY: CDS  
 LOCATION: (453)..(749)  
 OTHER INFORMATION: Protease  
 US-09-117-217-11

Query Match 44.9%; Score 1106.8; DB 3; Length 2601;  
 Best Local Similarity 68.3%; Pred. No. 2.6e-173;  
 Matches 1598; Conservative 0; Mismatches 723; Indels 19; Gaps 4;

43 GCCAATCTCTGATGAGCGCAGCACTTCAAGGCCCCCAAGGCGATCATCAAGTCTTC 102  
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 1428 TTCTTGGATGAGGTAAATGAACTCCATCTGTAATGAGACATCACTTAATGCTG 1487  
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Qy 1885 CAGGCCACTCGATCCCGAGTGGGAGTTCGTGAACACCCCGCCCTCGTGAAGCTTGG 1944  
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RESULT 10  
US-09-117-217-13  
; Sequence 13, Application US/09117217  
; Patent No. 6221578  
; GENERAL INFORMATION:  
; APPLICANT: de BETHUNE, Marie-Pierre  
; APPLICANT: HERTOGS, Kurt  
; APPLICANT: PAUWELS, Rudi  
; TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE  
; TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY  
; TITLE OF INVENTION: OF HUMAN HIV STRAINS  
; FILE REFERENCE: 1377-125P  
; CURRENT APPLICATION NUMBER: US/09/117,217  
; CURRENT FILING DATE: 1998-07-24  
; NUMBER OF SEQ ID NOS: 15  
; SOFTWARE: Patent In Ver. 2.0  
; SEQ ID NO 13  
; LENGTH: 2601  
; TYPE: DNA  
; ORGANISM: HIV-HXB2  
; FEATURE:  
; NAME/KEY: CDS  
; LOCATION: (750)..(2435)  
; OTHER INFORMATION: Reverse Transcriptase  
US-09-117-217-13

Query Match 44.9%; Score 1106.8; DB 3; Length 2601;  
Best Local Similarity 68.3%; Pred. No. 2.6e-173;  
Matches 1598; Conservative 0; Mismatches 723; Indels 19; Gaps 4;

Qy 43 GCCAATCTCTGATGACGCGCAGCACTTCACAGGCGCCCAAGCGCATCATCAATGCTTC 102  
Db 109 GCTACCAATATGATGTCAGAGAGGCAATTTTAGGAACCAAAAGAAAGATTGTTAAGTGTTC 168  
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Qy 163 TGGAAAGTGGCGAAGGAGGCGCCACAGATGAAGACTGCAACCGAGCGCCAGGCGCACTTC 222  
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Db 768 ACTGTACCACTAAATTTAAAGCCAGGATGGATGGCCCAAAAGTTAAACAATGGCCATTG 827  
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1788 AAAAAATCTGAAAAACAGAAAAATATGCAAGAAATAGAGGGGTGCCACATATGATGTAATA 1847  
1765 CAGCTACCGAGAGCCGCTGAGAAAGATCGCATGAGAGAGATCTGTGATCTGGGGCAAGACC 1824  
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2065 GTGAGCTTACCGAGACACCAACCAAGAGACCGAGCTGAGGCAATCAAGCTGGCCCTG 2124  
2148 GTACACCTTACCTGACCAACCAATCAGAGACTGAGTTACAGCAATTTATCTAGCTTG 2207  
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2305 CAGATGAGCAGAGTGTGAGCAAGGCAATCCGCAAGTGTCTGTCTGTGACGCGCATCGAT 2364

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RESULT 11  
US-09-735-487-7  
; Sequence 7, Application US/09735487  
; Patent No. 6528251  
; GENERAL INFORMATION:  
; APPLICANT: de BETHUNE, Marie-Pierre  
; APPLICANT: HERTOGS, Kint  
; APPLICANT: FAWELS, Rudi  
; TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE  
; TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY  
; FILE REFERENCE: 1377-125P  
; CURRENT APPLICATION NUMBER: US/09/735,487  
; PRIOR FILING DATE: 2000-12-14  
; PRIOR APPLICATION NUMBER: 09/117,217  
; PRIOR FILING DATE: 1998-07-24  
; NUMBER OF SEQ ID NOS: 15  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO: 7  
; LENGTH: 2601  
; TYPE: DNA  
; ORGANISM: HIV-HXB2  
; FEATURE:  
; NAME/KEY: CDS  
; LOCATION: (1)..(492)  
; OTHER INFORMATION: gag Polypeptide  
US-09-735-487-7  
Query Match 44.9%; Score 1106.8; DB 4; Length 2601;  
Best Local Similarity 68.3%; Pred No. 2,6e-173;  
Matches 1598; Conservative 0; Mismatches 723; Indels 19; Gaps 4;  
QY 43 GCACATCTGATGACAGGCAAGTTCAGAGGCGCCCAAGCGCATCATCAAGTCTTC 102  
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Db  
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Qy 1705 AAGAACCTGAAGACCGGCAAGTACGCCAAGATGCGCACCGCCACACCAACGAGCTGAAG 1764  
Db 1788 AAAAACTGAAAAACAGAAAAATATCAAGAAATAGAGGGTGGCCACACTAATGATGTAAAA 1847  
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Qy 2005 AACCGGAGACCAAGATCGGCAAGCGCGGTACGTGACCGACCGGGCCGCGCAGAGATC 2064  
Db 2088 AACAGGAGAGCTAAATTTAGGAAAAGCAGGATATGTTACTAATAGAGGAAGACAAAAGTT 2147  
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## RESULT 12

US-09-735-487-9  
; Sequence 9, Application US/09735487  
; Patent No. 6528251  
; GENERAL INFORMATION:  
; APPLICANT: de BETHUNE, Marie-Pierre  
; APPLICANT: HERTOGS, Kurt  
; APPLICANT: PAUWELS, Rudi  
; TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE  
; TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY  
; TITLE OF INVENTION: OF HUMAN HIV STRAINS  
; FILE REFERENCE: 1377-125P  
; CURRENT APPLICATION NUMBER: US/09/735,487  
; CURRENT FILING DATE: 2000-12-14  
; PRIOR APPLICATION NUMBER: 09/117,217  
; PRIOR FILING DATE: 1998-07-24  
; NUMBER OF SEQ ID NOS: 15  
; SOFTWARE: Patentin Ver. 2.0  
; SEQ ID NO 9  
; LENGTH: 2601  
; TYPE: DNA  
; ORGANISM: HIV-HXB2  
; FEATURE:  
; NAME/KEY: CDS  
; LOCATION: (334)..(489)  
; OTHER INFORMATION: gag P6 (52 AA)  
US-09-735-487-9

Query Match 44.9%; Score 1106.8; DB 4; Length 2601;  
 Best Local Similarity 68.3%; Pred. No. 2,6e-173;  
 Matches 1598; Conservative 0; Mismatches 723; Indels 19; Gaps 4;

QY 43 GCCAACATCTTGATGACGCGCACCACTTCAGGCGCCCAAGCGCATCATCATGCTTC 102  
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RESULT 13
US-09-735-487-11
; Sequence 11, Application US/09735487
; Patent No. 6528251
; GENERAL INFORMATION:
; APPLICANT: GE BETHUNE, Marie-Pierre
; APPLICANT: HERTOGS, Kurt
; APPLICANT: PAUWELS, Rudi
; TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE
; TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY
; FILE REFERENCE: 1377-125P
; CURRENT APPLICATION NUMBER: US/09/735,487
; CURRENT FILING DATE: 2000-12-14
; PRIOR FILING DATE: 09/11/217
; NUMBER OF SEQ ID NOS: 15
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 11
; LENGTH: 2601
; TYPE: DNA
; ORGANISM: HIV-HXB2
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (453)...(749)
; OTHER INFORMATION: Protease
US-09-735-487-11

Query Match 44.9%; Score 1106.8; DB 4; Length 2601;
Best Local Similarity 68.3%; Pred. No. 2.6e-173;
Matches 1598; Conservative 0; Mismatches 723; Indels 19; Gaps 4;

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QY 223 TTCCGCGAGGACTGGCTTCCCGCGGCAAGGCGCGGAGTTCCCGAGCGAGCAGAAAC 282
Db 288 TTAGGGAAGATCTGGCTTCTTCAAGGGAAGGCGCGAGGAAATTTCTTCAGAGCAGACC 347
QY 283 CGCGCAACAGCCCCACAGCGCGGAGCTGAGGTGCGGG-----CGAACAACCCCGC 336
Db 348 AGAGCCAAAGCGCCCAAGAGAGAGCTTCAGGTCTGGGTAGACAACAACACTCCCCC 407
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GenCore version 5.1.6  
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OM nucleic - nucleic search, using sw model

Run on: October 12, 2003, 12:35:37 ; Search time 435.667 Seconds  
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Perfect score: 2463

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Scoring table: IDENTITY\_NUC

Gapop 10.0 , Gapext 1.0

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Post-processing: Minimum Match 0%

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Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

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2	2430.2	98.7	2457	12	US-10-190-435-45
3	2422.6	98.4	2445	12	US-10-190-435-43
4	2415.6	98.1	3930	12	US-10-190-435-9
5	2414	98.0	3930	12	US-10-190-435-10
6	2414	98.0	3930	12	US-10-190-435-11
7	2414	98.0	5184	12	US-10-190-435-58
8	2383.6	96.8	3531	12	US-10-190-435-13
9	2382	96.7	3537	12	US-10-190-435-14
10	2382	96.7	3537	12	US-10-190-435-15
11	2381	96.7	5145	12	US-10-190-435-12
12	2322.6	94.3	3607	12	US-10-190-435-48
13	2322.6	94.3	3624	12	US-10-190-435-47
14	2304.4	93.6	3597	12	US-10-190-435-46
15	2142	87.0	2466	12	US-10-241-009-31
16	2122.8	86.2	2472	12	US-10-241-009-32

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18	2114.2	85.8	3564	12	US-10-241-009-13
19	2114.2	85.8	3564	12	US-10-241-009-14
20	2113.6	85.8	4716	12	US-10-190-435-17
21	2109.8	85.7	3999	12	US-10-241-009-9
22	2108.2	85.6	3999	12	US-10-241-009-10
23	2108.2	85.6	3999	12	US-10-241-009-11
24	2108.2	85.6	5283	12	US-10-241-009-54
25	2108	85.6	4713	12	US-10-190-435-59
26	2107.6	85.6	3462	12	US-10-190-435-16
27	2082.2	84.5	3735	12	US-10-241-009-34
28	2075.2	84.3	5274	12	US-10-241-009-12
29	2034	81.8	3639	12	US-10-241-009-33
30	1998.6	81.1	3636	12	US-10-241-009-56
31	1968.4	79.9	1971	12	US-10-190-435-49
32	1953.6	79.3	3231	12	US-10-190-435-60
33	1948.8	79.1	3234	12	US-10-190-435-51
34	1941.6	78.8	1965	12	US-10-190-435-50
35	1891.8	76.8	4773	12	US-10-241-009-16
36	1883	76.5	3496	12	US-10-241-009-15
37	1883	76.5	4773	12	US-10-241-009-55
38	1880.6	76.4	2145	12	US-10-241-009-35
39	1806.8	73.4	2262	12	US-10-241-009-39
40	1798.2	73.0	1971	12	US-10-241-009-38
41	1783.8	72.4	3261	12	US-10-241-009-57
42	1781.2	72.3	1989	12	US-10-241-009-47
43	1779.2	72.2	3264	12	US-10-241-009-43
44	1779	72.2	1977	12	US-10-241-009-41
45	1778.4	72.2	3252	12	US-10-241-009-42

#### ALIGNMENTS

#### RESULT 1

US-10-190-435-44  
; Sequence 44, Application US/10190435  
; Publication No. US20030143248A1  
; GENERAL INFORMATION:  
; APPLICANT: ZUR MEGEDE, Jan  
; APPLICANT: BARNETT, Susan W.  
; APPLICANT: LIAN, Ying  
; APPLICANT: ENGELBRECHT, Susan  
; APPLICANT: VAN RENSBERG, Estrelita J.  
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C  
; FILE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF  
; FILE REFERENCE: P18133.003 / 2302-18133  
; CURRENT APPLICATION NUMBER: US/10/190,435  
; CURRENT FILING DATE: 2002-12-30  
; NUMBER OF SEQ ID NOS: 319  
; SOFTWARE: Patentin Ver. 2.0  
; SEQ ID NO 44  
; LENGTH: 2457  
; TYPE: DNA  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: Description of Artificial Sequence: p2Polopt.YM\_C  
US-10-190-435-44

QY	1	GTCTAGCGCCACCATGCGCGAGCCCATGAGCGCCACCGAGCGCCACCATCTGTATGCAG 60	Query Match 99.7%; Score 2455.4; DB 12; Length 2457;
Db	1	GTCTAGCGCCACCATGCGCGAGCCCATGAGCGCCACCGAGCGCCACCATCTGTATGCAG 60	Best Local Similarity 100.0%; Pred. No. 0; Matches 2456; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY	61	CGCAGCACTTCAAGGGCCCGAGCGCATCATCAAGTCTTCAACTGCGGCAAGAGGGC 120	
Db	61	CGCAGCACTTCAAGGGCCCGAGCGCATCATCAAGTCTTCAACTGCGGCAAGAGGGC 120	
QY	121	CACATCGCCCGCAACTGCGCGCCCGCCGAGAGGGCTGCTGGAAGTGGCGCAGAG 180	

Db 121 CACATCGCCCGCACTGCGCGCCCCCGCAAGAAAGGCTGCTGGAAGTGCGGCAAGAG 180  
 Qy 181 GGCACCAAGATGAAGACTGACACCGAGCGCCAGGCAACTTCTTCGCGAGGACTGCGC 240  
 Db 181 GGCACCAAGATGAAGACTGACACCGAGCGCCAGGCAACTTCTTCGCGAGGACTGCGC 240  
 Qy 241 TTTCCCGCAGGCGCAAGGCGCGAGTTTCCCGACGAGCAAGACCGCGCCACAGCCCCACC 300  
 Db 241 TTTCCCGCAGGCGCAAGGCGCGAGTTTCCCGACGAGCAAGACCGCGCCACAGCCCCACC 300  
 Qy 301 AGCCCGAGCTGCAAGTGCAGCGGCAACACCCCGCAGAGGCGCGCGCGCGAGCGCCAG 360  
 Db 301 AGCCCGAGCTGCAAGTGCAGCGGCAACACCCCGCAGAGGCGCGCGCGCGAGCGCCAG 360  
 Qy 361 GGCACCTGAATCTTCCCGCAATCACTCTGTGAGCGCCCGCTGTGTAGATCAAGGTG 420  
 Db 361 GGCACCTGAATCTTCCCGCAATCACTCTGTGAGCGCCCGCTGTGTAGATCAAGGTG 420  
 Qy 421 GCGCGCCAGATCAAGAGAGCCCTGCTGGCAACCGCGCCGACGACACCGTGTGAGGAG 480  
 Db 421 GCGCGCCAGATCAAGAGAGCCCTGCTGGCAACCGCGCCGACGACACCGTGTGAGGAG 480  
 Qy 481 ATGAGCTTGCCTGGCAATGTGAAGCCCAAGATGATGCGGCTGCGGCTTCACTCAAG 540  
 Db 481 ATGAGCTTGCCTGGCAATGTGAAGCCCAAGATGATGCGGCTGCGGCTTCACTCAAG 540  
 Qy 541 GTGCGCCAGTACAGACCAATCTTATCGAGATCTGCGCAAGAGCCATCGGCACTG 600  
 Db 541 GTGCGCCAGTACAGACCAATCTTATCGAGATCTGCGCAAGAGCCATCGGCACTG 600  
 Qy 601 CTGATCGGCCCCCGCGTGAACATCATCGCGCGCAACATGCTGACCCAGCTGAGCTGC 660  
 Db 601 CTGATCGGCCCCCGCGTGAACATCATCGCGCGCAACATGCTGACCCAGCTGAGCTGC 660  
 Qy 661 ACCCTGAATCTTCCCATCAAGCCCCCATCGAGACCGTGCCTGTAACTGAAGCGCGCATG 720  
 Db 661 ACCCTGAATCTTCCCATCAAGCCCCCATCGAGACCGTGCCTGTAACTGAAGCGCGCATG 720  
 Qy 721 GACGCGCCCAAGTGAACAGAGTGCCTGTGACCGAGAGAAAGATCAAGGCGCTGACCGCC 780  
 Db 721 GACGCGCCCAAGTGAACAGAGTGCCTGTGACCGAGAGAAAGATCAAGGCGCTGACCGCC 780  
 Qy 781 ATCTGCGAGAGATGAAGAGAGGCGCAAGATCAACCAAGATGCGCCCGAGAACCTCTAC 840  
 Db 781 ATCTGCGAGAGATGAAGAGAGGCGCAAGATCAACCAAGATGCGCCCGAGAACCTCTAC 840  
 Qy 841 AACACCCCGGTTCGCGCATCAAGAGAGAGCAACCAAGTGCAGAGTGTGTGAC 900  
 Db 841 AACACCCCGGTTCGCGCATCAAGAGAGAGCAACCAAGTGCAGAGTGTGTGAC 900  
 Qy 901 TTTCCGCGAGCTGAACAGACGACGAGACTTCTGTGAGTGCAGCTGCGCATCCCCAC 960  
 Db 901 TTTCCGCGAGCTGAACAGACGACGAGACTTCTGTGAGTGCAGCTGCGCATCCCCAC 960  
 Qy 961 CCGCGCGGCTGGAAGAAAGAGAGCTGACCTGTGTGAGCTGTGCGAGCGCTACTTTC 1020  
 Db 961 CCGCGCGGCTGGAAGAAAGAGAGCTGACCTGTGTGAGCTGTGCGAGCGCTACTTTC 1020  
 Qy 1021 AGCGTGCCTGGAAGAGAGACTTCCGCAAGTACACCGGCTTCAACATCCCGACATCAAC 1080  
 Db 1021 AGCGTGCCTGGAAGAGAGACTTCCGCAAGTACACCGGCTTCAACATCCCGACATCAAC 1080  
 Qy 1081 AACGAGACCCCGCGCATCGCTACCAAGTACCAAGTGTGCGCCAGGCTGGAAGGCGACG 1140  
 Db 1081 AACGAGACCCCGCGCATCGCTACCAAGTACCAAGTGTGCGCCAGGCTGGAAGGCGACG 1140  
 Qy 1141 CCGAGCATCTTCCAGAGAGAGATGACCAAGATCTCGAGAGCGCTTCCGCGCGCAACCCC 1200  
 Db 1141 CCGAGCATCTTCCAGAGAGAGATGACCAAGATCTCGAGAGCGCTTCCGCGCGCAACCCC 1200  
 Qy 1201 GAGATCGTATCTACAGGCGCCCGCTGTAAGTGTGCGCAAGAGACTGTGAGATCGGCGAC 1260  
 Db 1201 GAGATCGTATCTACAGGCGCCCGCTGTAAGTGTGCGCAAGAGACTGTGAGATCGGCGAC 1260

Qy 1261 CGCGCAAGATCGAGAGCTGCGCAAGACACTGTGCGTGTGCGCTTCAACACCCCGGAC 1320  
 Db 1261 CGCGCAAGATCGAGAGCTGCGCAAGACACTGTGCGTGTGCGCTTCAACACCCCGGAC 1320  
 Qy 1321 AAGAAGACCAAGAAAGAGCCCTTCTGTGATGTGGCTTACAGACTGACCCCGAGAG 1380  
 Db 1321 AAGAAGACCAAGAAAGAGCCCTTCTGTGATGTGGCTTACAGACTGACCCCGAGAG 1380  
 Qy 1381 TGAACCTGCAAGCTGATGAGCTTCCGAGAGAGAGCTGAGACCTGTGAACGACATCCAG 1440  
 Db 1381 TGAACCTGCAAGCTGATGAGCTTCCGAGAGAGAGCTGAGACCTGTGAACGACATCCAG 1440  
 Qy 1441 AAGCTGTGGGCAAGCTGAACCTGTGGCCAGGACGATCAACCCCGCATCAAGTGTGCGAG 1500  
 Db 1441 AAGCTGTGGGCAAGCTGAACCTGTGGCCAGGACGATCAACCCCGCATCAAGTGTGCGAG 1500  
 Qy 1501 CTGTGAAGCTGTGCGCGCGCCAGAGCCCTGACCGACATCGTGCCTGTGACCGAGAG 1560  
 Db 1501 CTGTGAAGCTGTGCGCGCGCCAGAGCCCTGACCGACATCGTGCCTGTGACCGAGAG 1560  
 Qy 1561 GCGAGCTGAGAGCTGCGCGAGAACCGGAGATCTGTGCGGACGCGCTGTGAC 1620  
 Db 1561 GCGAGCTGAGAGCTGCGCGAGAACCGGAGATCTGTGCGGACGCGCTGTGAC 1620  
 Qy 1621 TACGACCCCAAGAGACCTGTGTGGCCGAGATCCAGAGAGGCGCACGACAGTGAAC 1680  
 Db 1621 TACGACCCCAAGAGACCTGTGTGGCCGAGATCCAGAGAGGCGCACGACAGTGAAC 1680  
 Qy 1681 TACCAGATCTTACAGAGAGCCCTTCAAGAACCTGAAAGACCGGCAAGTACGCCAAGTGC 1740  
 Db 1681 TACCAGATCTTACAGAGAGCCCTTCAAGAACCTGAAAGACCGGCAAGTACGCCAAGTGC 1740  
 Qy 1741 ACCGCGCAACCAAGAGAGAGTGAAGAGACTGACCGAGGCGGTGAGAAAGTGGCATGAG 1800  
 Db 1741 ACCGCGCAACCAAGAGAGAGTGAAGAGACTGACCGAGGCGGTGAGAAAGTGGCATGAG 1800  
 Qy 1801 AGCATGCTGATCTGTGGGCAAGAGACCCCAAGTTCGCTGCGCATCCAGAGAGACCTG 1860  
 Db 1801 AGCATGCTGATCTGTGGGCAAGAGACCCCAAGTTCGCTGCGCATCCAGAGAGACCTG 1860  
 Qy 1861 GAGACCTGTGAGAGCTGCTGACAGAGCCACTGGAATCCCGAGTGGAGTTGTGAAC 1920  
 Db 1861 GAGACCTGTGAGAGCTGCTGACAGAGCCACTGGAATCCCGAGTGGAGTTGTGAAC 1920  
 Qy 1921 ACCCGCGCGTGTGAGAGCTGTGTGTAACAAGTGAAGAGAGCCCATCATCGGCGGAG 1980  
 Db 1921 ACCCGCGCGTGTGAGAGCTGTGTGTAACAAGTGAAGAGAGCCCATCATCGGCGGAG 1980  
 Qy 1981 ACCTTCAAGTGAAGAGAGCTGCGCAACCGGCAACCAAGATCGGCAAGGCGGCTACG 2040  
 Db 1981 ACCTTCAAGTGAAGAGAGCTGCGCAACCGGCAACCAAGATCGGCAAGGCGGCTACG 2040  
 Qy 2041 ACCGACCGGCGCGGCAAGAGATGTGAGCTGTGACCGAGACCAAGACCAAGAGAGCGAG 2100  
 Db 2041 ACCGACCGGCGCGGCAAGAGATGTGAGCTGTGACCGAGACCAAGAGAGAGCGAG 2100  
 Qy 2101 CTGAGGCGCATCAAGCTGCGCGCTGTGAGAGAGGCGGCAAGAGTGAACATGTGAACGAC 2160  
 Db 2101 CTGAGGCGCATCAAGCTGCGCGCTGTGAGAGAGGCGGCAAGAGTGAACATGTGAACGAC 2160  
 Qy 2161 AGCGAGTGCCTGTGAGAGCTGAGGACCGGCAAGAGAGAGAGAGAGAGAGAGTGTG 2220  
 Db 2161 AGCGAGTGCCTGTGAGAGCTGAGGACCGGCAAGAGAGAGAGAGAGAGAGAGTGTG 2220  
 Qy 2221 AACCAATCATCGAGAGCTGTATCAAGAGAGAGAGTGTACTGTAGCTGTGTGCGCGC 2280  
 Db 2221 AACCAATCATCGAGAGCTGTATCAAGAGAGAGAGTGTACTGTAGCTGTGTGCGCGC 2280  
 Qy 2281 CACAAGGCGCATCGGCGGCAAGAGAGATGAGCAAGTGTGTGAGAGAGAGAGATCCGCAAG 2340  
 Db 2281 CACAAGGCGCATCGGCGGCAAGAGAGATGAGCAAGTGTGTGAGAGAGAGAGATCCGCAAG 2340



QY 2341 GTGCTGTTCTGACGCGCATCGATGGCGGCATCTGTATCTTACCAGTACATGGACGACCTG 2400  
 Db 2341 GTGCTGTTCTGACGCGCATCGATGGCGGCATCTGTATCTTACCAGTACATGGACGACCTG 2400  
 QY 2401 TAGCTGGGACGCGCGCCCTAGGATCGATTAAAGCTTCCCGGGGTAGCACCGGT 2457  
 Db 2401 TAGCTGGGACGCGCGCCCTAGGATCGATTAAAGCTTCCCGGGGTAGCACCGGT 2457

RESULT 2  
 US-10-190-435-45  
 ; Sequence 45, Application US/10190435  
 ; Publication No. US20030143248A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: ZUR MEDEDE, Jan  
 ; APPLICANT: BARNETT, Susan W.  
 ; APPLICANT: LIAN, Ying  
 ; APPLICANT: ENGELBRECHT, Susan  
 ; APPLICANT: VAN RENSBURG, Estrelita J.  
 ; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C  
 ; FILE REFERENCE: PP18133.003 / 2302-18133  
 ; CURRENT APPLICATION NUMBER: US/10/190,435  
 ; CURRENT FILING DATE: 2002-12-30  
 ; NUMBER OF SEQ ID NOS: 319  
 ; SOFTWARE: PatentIn Ver. 2.0  
 ; SEQ ID NO 45  
 ; LENGTH: 2457  
 ; TYPE: DNA  
 ; ORGANISM: Artificial Sequence  
 ; FEATURE:  
 ; OTHER INFORMATION: Description of Artificial Sequence: p2Polopt\_C  
 US-10-190-435-45

Query Match 98.7%; Score 2430.2; DB 12; Length 2457;  
 Best Local Similarity 99.8%; Pred. No. 0;  
 Matches 2448; Conservative 0; Mismatches 3; Indels 6; Gaps 1;

QY 7 GCCACCATGGCCGAGCCATGAGCCAGGCCACAGCGCCACACATCTGTATGACGCGCAGC 66  
 Db 1 GCCACCATGGCCGAGCCATGAGCCAGGCCACAGCGCCACACATCTGTATGACGCGCAGC 60  
 QY 67 AACTTCAAGGGCCCCAAGCGCATCATCAAGTGTTCAACTGCGGCAAGGAGGCCACATC 126  
 Db 61 AACTTCAAGGGCCCCAAGCGCATCATCAAGTGTTCAACTGCGGCAAGGAGGCCACATC 120  
 QY 127 GCGCGCAACTGCGCGCCGCCCGCCAGAGAGGGTGTCTGGAAGTGGCGCAAGAGGGCCAC 186  
 Db 121 GCGCGCAACTGCGCGCCGCCCGCCAGAGAGGGTGTCTGGAAGTGGCGCAAGAGGGCCAC 180  
 QY 187 CAGATGAAGGACTGACACCGAGCGCCAGGCCAACTTCTTCGCGAGGACCTTGGGCTTCCCC 246  
 Db 181 CAGATGAAGGACTGACACCGAGCGCCAGGCCAACTTCTTCGCGAGGACCTTGGGCTTCCCC 240  
 QY 247 CAGGGAAGGCCCGCGAGTTCCCGAGGAGAGAACCGCGCCAAACCGCCCAACCGCCGC 306  
 Db 241 CAGGGAAGGCCCGCGAGTTCCCGAGGAGAGAACCGCGCCAAACCGCCCAACCGCCGC 300  
 QY 307 GAGCTCAGGTGGCGGCGACACACCGCGAGGAGCGCGCGCGCGCGAGCGCGCGCGCGC 366  
 Db 301 GAGCTCAGGTGGCGGCGACACACCGCGAGGAGCGCGCGCGCGCGCGCGCGCGCGCGC 360  
 QY 367 CTGAATCTCCCGCAGATCACTGTGGCAGCGCCCTCTGTGAGCATCAAGTGGCGCGC 426  
 Db 361 CTGAATCTCCCGCAGATCACTGTGGCAGCGCCCTCTGTGAGCATCAAGTGGCGCGC 420  
 QY 427 CAGATCAAGGAGGCCCTGTGTGACACCGCGCGCGAGACACCGCTGTGTGAGGAGATGAGC 486  
 Db 421 CAGATCAAGGAGGCCCTGTGTGACACCGCGCGCGAGACACCGCTGTGTGAGGAGATGAGC 480  
 QY 487 CTGCGCGCAAGTGAAGCCCAAGATGATGCGCGCATCGGCGGCTTCAATCAAGGTGCGC 546  
 Db 481 CTGCGCGCAAGTGAAGCCCAAGATGATGCGCGCATCGGCGGCTTCAATCAAGGTGCGC 540

QY 547 CAGTAGCACCATCTCTGATCGAGATCTCGGCAAGAGGCCATCGGCAACCGTGTGTGATC 606  
 Db 541 CAGTAGCACCATCTCTGATCGAGATCTCGGCAAGAGGCCATCGGCAACCGTGTGTGATC 600  
 QY 607 GSCCCCAACCCCGTGAACATCATCGGCCGCAACATGCTGACCCAGCTGGGCTGACCCCTG 666  
 Db 601 GSCCCCAACCCCGTGAACATCATCGGCCGCAACATGCTGACCCAGCTGGGCTGACCCCTG 660  
 QY 667 AACTTCCCATCAGCCCATCGAGACCCGTCGCGTGAAGCTGAAGCCCGGATGGAACGGC 726  
 Db 661 AACTTCCCATCAGCCCATCGAGACCCGTCGCGTGAAGCTGAAGCCCGGATGGAACGGC 720  
 QY 727 CCAAGGTGAAGCAGTGGCCCTGACCGAGGAGAGATCAAGGCCCTGTGACCGCATCTGC 786  
 Db 721 CCAAGGTGAAGCAGTGGCCCTGACCGAGGAGAGATCAAGGCCCTGTGACCGCATCTGC 780  
 QY 787 GAGGAGATGGAAGAGGCGCAAGATCAACAAGATCGGCCCGGAGAACCCCTACAAACACC 846  
 Db 781 GAGGAGATGGAAGAGGCGCAAGATCAACAAGATCGGCCCGGAGAACCCCTACAAACACC 840  
 QY 847 CCGCTGTTCCCATCAAGAAAGAGAGACACAAAGTGGCGCAAGCTGTGTGACTTCCGC 906  
 Db 841 CCGCTGTTCCCATCAAGAAAGAGAGACACAAAGTGGCGCAAGCTGTGTGACTTCCGC 900  
 QY 907 GAGCTGAACAAGCGCACCCAGGACTTCTGGGAGGTGACCTGGGCATCCCGCACCCCGCC 966  
 Db 901 GAGCTGAACAAGCGCACCCAGGACTTCTGGGAGGTGACCTGGGCATCCCGCACCCCGCC 960  
 QY 967 GGCCTGAAGAAGAAGAAGCGTGAACCGTGTGGACGTGGGCGACGCTTACCTTACGCTG 1026  
 Db 961 GGCCTGAAGAAGAAGAAGCGTGAACCGTGTGGACGTGGGCGACGCTTACCTTACGCTG 1020  
 QY 1027 CCGCTGGACGAGACTTCGGGAAGTACACCGCTTCAACATCCCGCAGCATCAACAACGAG 1086  
 Db 1021 CCGCTGGACGAGACTTCGGGAAGTACACCGCTTCAACATCCCGCAGCATCAACAACGAG 1080  
 QY 1087 ACCCCCGGATCCGCTACAGTACAAAGTGTGCTGCCCGGCTGGAAGGCGCCCGCAGC 1146  
 Db 1081 ACCCCCGGATCCGCTACAGTACAAAGTGTGCTGCCCGGCTGGAAGGCGCCCGCAGC 1140  
 QY 1147 ATCTTCCAGAGCAGCATGACCAAGATCTTGAAGCCCTTCCGCGCCCGCAACCCCGAGATC 1206  
 Db 1141 ATCTTCCAGAGCAGCATGACCAAGATCTTGAAGCCCTTCCGCGCCCGCAACCCCGAGATC 1200  
 QY 1207 GTGATCTACCA-----GGCCCCCTGTACGTGGGCGAGCACTGGAGATCGGCCAGCAC 1260  
 Db 1201 GTGATCTACCAAGCATGAGACGACCTGTACGTGGGCGAGCACTGGAGATCGGCCAGCAC 1260  
 QY 1261 CGCGCCAAAGATCGAGAGCTGCGCAAGCACCTGCTCGCTGGGGCTTCAACCCCGGAGC 1320  
 Db 1261 CGCGCCAAAGATCGAGAGCTGCGCAAGCACCTGCTCGCTGGGGCTTCAACCCCGGAGC 1320  
 QY 1321 AAGAAGCACCAAGAGAGCCCTTCTGTGGATGGGTACGAGCTGCACCCCGCAACAG 1380  
 Db 1321 AAGAAGCACCAAGAGAGCCCTTCTGTGGATGGGTACGAGCTGCACCCCGCAACAG 1380  
 QY 1381 TGAACCGTGCAGCCCATGAGCTGCCGAGAAAGAGAGTGAACCGTGAACGACTTCCAG 1440  
 Db 1381 TGAACCGTGCAGCCCATGAGCTGCCGAGAAAGAGAGTGAACCGTGAACGACTTCCAG 1440  
 QY 1441 AAGCTGTGGGCAAGCTGAACCTGGGCCAGCAGATCTACCCCGGATCAAGTGGCGCAG 1500  
 Db 1441 AAGCTGTGGGCAAGCTGAACCTGGGCCAGCAGATCTACCCCGGATCAAGTGGCGCAG 1500  
 QY 1501 CTGTGCAAGCTGCTCGCGGCGCCAAAGCCCTTGAACGACATCTGTCCCTGTACCCGAGAG 1560  
 Db 1501 CTGTGCAAGCTGCTCGCGGCGCCAAAGCCCTTGAACGACATCTGTCCCTGTACCCGAGAG 1560  
 QY 1561 GCCGAGCTGGAGCTGGCCGAGAACCGCGAGATCTTTCGCGGAGCCCGTGCACGCGGTGTAC 1620  
 Db 1561 GCCGAGCTGGAGCTGGCCGAGAACCGCGAGATCTTTCGCGGAGCCCGTGCACGCGGTGTAC 1620

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QY 1621 TACGACCCCGACGAAGGACTGTGGCCGAGATCCAGAAAGAGGCGACGACCACTGTGACC 1680
Db 1621 TACGACCCCGACGAAGGACTGTGGCCGAGATCCAGAAAGAGGCGACGACCACTGTGACC 1680
QY 1681 TACGAGATCTACGAGAGCCCTTCAAGAACTGAAAGACCGGCAAGTACGCCAAGATGGCC 1740
Db 1681 TACGAGATCTACGAGAGCCCTTCAAGAACTGAAAGACCGGCAAGTACGCCAAGATGGCC 1740
QY 1741 ACCGCGCCACCAACGAGCTGAGAGCTGACCGAGGCGCGTGGCAAGAAATGTCGATGGAG 1800
Db 1741 ACCGCGCCACCAACGAGCTGAGAGCTGACCGAGGCGCGTGGCAAGAAATGTCGATGGAG 1800
QY 1801 AGCATCTGTATCTGAGGAGACCCCAAGTTCCGCTCCCATCAAGAAAGAGACCTGG 1860
Db 1801 AGCATCTGTATCTGAGGAGACCCCAAGTTCCGCTCCCATCAAGAAAGAGACCTGG 1860
QY 1861 GAGACCTGTGTGACCCGACTACTGGCAGGCCACCTGGAATCCCGAGTGGGAATTGTGAAC 1920
Db 1861 GAGACCTGTGTGACCCGACTACTGGCAGGCCACCTGGAATCCCGAGTGGGAATTGTGAAC 1920
QY 1921 ACCCGCCCGCTGTGTAAGCTGTGTGACCTGAGCTGGAGAAAGAGCCCATCATCGGCGCGAG 1980
Db 1921 ACCCGCCCGCTGTGTAAGCTGTGTGACCTGAGCTGGAGAAAGAGCCCATCATCGGCGCGAG 1980
QY 1981 ACCTTCTACCTGTGAACGCGCGCCCAACCGCAAGACCAAGATCGGCAAGCGGCTACGCTG 2040
Db 1981 ACCTTCTACCTGTGAACGCGCGCCCAACCGCAAGACCAAGATCGGCAAGCGGCTACGCTG 2040
QY 2041 ACCGACCGGCGCGCGCAAGAAATCTGTGACCTGTGACCGGAGACCAACCAAGAAACCGAG 2100
Db 2041 ACCGACCGGCGCGCGCAAGAAATCTGTGACCTGTGACCGGAGACCAACCAAGAAACCGAG 2100
QY 2101 CTGAGAGGCTACCTGAGCTGCGCTGTGAGAGACGCGGCAAGAGTGAACATGTGTGACGAC 2160
Db 2101 CTGAGAGGCTACCTGAGCTGCGCTGTGAGAGACGCGGCAAGAGTGAACATGTGTGACGAC 2160
QY 2161 AGCGAGTACGCGCTGTGAGCTATCCAGGCGCAAGCTCCGCAAGAGCGAGAGCTGTGTG 2220
Db 2161 AGCGAGTACGCGCTGTGAGCTATCCAGGCGCAAGCTCCGCAAGAGCGAGAGCTGTGTG 2220
QY 2221 AACGAGATCATGAGAGCTGATCAAGAAAGAGAGTGTACTGAGTGTGTGTGCGCGCC 2280
Db 2221 AACGAGATCATGAGAGCTGATCAAGAAAGAGAGTGTACTGAGTGTGTGTGCGCGCC 2280
QY 2281 CACAAGGCGATCGGCGGCAAGAGAGATCCGCAAGCTGTGAGCAAGGCGATCCGCAAG 2340
Db 2281 CACAAGGCGATCGGCGGCAAGAGAGATCCGCAAGCTGTGAGCAAGGCGATCCGCAAG 2340
QY 2341 GTGCTGTCTGTGAGCGGATGTGATGGCGGCAATCGTATCTACAGTACATGAGACGACTG 2400
Db 2341 GTGCTGTCTGTGAGCGGATGTGATGGCGGCAATCGTATCTACAGTACATGAGACGACTG 2400
QY 2401 TACGAGGCGAGCGGCGGCTGAGAGTGTATTAAGCTCCCGGCGCTAGAGCAAGCGGT 2457
Db 2401 TACGAGGCGAGCGGCGGCTGAGAGTGTATTAAGCTCCCGGCGCTAGAGCAAGCGGT 2457

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# RESULT 3

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; Sequence 43, Application US/10190435
; Publication No. US20030143248A1
; GENERAL INFORMATION:
; APPLICANT: ZUR MEGEDE, Jan
; APPLICANT: BARNETT, Susan W.
; APPLICANT: LIAN, Ying
; APPLICANT: ENGELBRECHT, Susan
; APPLICANT: VAN RENSBURG, Esterelita J.
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
; FILE REFERENCE: P1813.003 / 2302-18133
; CURRENT APPLICATION NUMBER: US/10190,435
; CURRENT FILING DATE: 2002-12-30
; NUMBER OF SEQ ID NOS: 319

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; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 43
; LENGTH: 2445
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: p2Pol.opt.YMMW_C
US-10-190-435-43

Query Match      98.4%; Score 2422.6; DB 12; Length 2445;
Best Local Similarity 99.6%; Pred. No. 0;
Matches 2441; Conservative 0; Mismatches 4; Indels 6; Gaps 1;

QY 7 GCCACCATGAGCGGCGCATGAGCGAGGCGACGAGCGCCCAACATCTCGATGAGCGAGC 66
Db 1 GCCACCATGAGCGGCGCATGAGCGAGGCGACGAGCGCCCAACATCTCGATGAGCGAGC 60
QY 67 AACTTCAGAGGCGCCCAAGCGCATATCAATGCTTCAACTGCGGCAAGAGGCGCACATC 120
Db 61 AACTTCAGAGGCGCCCAAGCGCATATCAATGCTTCAACTGCGGCAAGAGGCGCACATC 120
QY 127 GCCCGCACTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 186
Db 121 GCCCGCACTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 180
QY 187 CAGATGAAGAGCTGACCGAGCGCGAGGCGCACTTCTTCCGCGAGAGACTGACCTTCC 246
Db 181 CAGATGAAGAGAGCTGACCGAGCGCGAGGCGCACTTCTTCCGCGAGAGACTGACCTTCC 240
QY 247 CAGGCGAAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 306
Db 241 CAGGCGAAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 300
QY 307 GAGCTGAGGAGGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 366
Db 301 GAGCTGAGGAGGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 360
QY 367 CTGAATTTCCCGAGATCACTCTGTGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 426
Db 361 CTGAATTTCCCGAGATCACTCTGTGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 420
QY 427 CAGATCAAGAGGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 486
Db 421 CAGATCAAGAGGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 480
QY 487 CTGCGCGGCAAGTGAAGCGCCCAAGATGATCGGCGGCAATCGGCGGCTTCAACAAGTGGC 546
Db 481 CTGCGCGGCAAGTGAAGCGCCCAAGATGATCGGCGGCAATCGGCGGCTTCAACAAGTGGC 540
QY 547 CAGTACGACAGATCTGATCGAGATCTGCGGCAAGAGGCAATCGGCAACCGTGTGATC 606
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QY 847 CCGCGTGTGCGCATCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 906
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907 GAGCTGAACAAGGCGCACCCAGGACTTCTGGAGGTGACGTGGGCATCTCCCCACCCCGCC 966  
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QY 1927 CCCTTGTGAAGCTGTGTGATCAGAGTGGAGAGGCGCATCATCGGCGCGAGAGCTTC 1986  
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; Sequence 9, Application US/10190435  
; Publication No. US20030143248A1  
; GENERAL INFORMATION:  
; APPLICANT: ZUR MEGEDE, Jan  
; APPLICANT: BARNETT, Susan W.  
; APPLICANT: LIAN, Ying  
; APPLICANT: ENGBELBRECHT, Susan  
; APPLICANT: VAN RENSBURG, Estrelita J.  
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C  
; FILE REFERENCE: PP19133.003 / 2302-18133  
; CURRENT APPLICATION NUMBER: US/10/190,435  
; CURRENT FILING DATE: 2002-12-30  
; NUMBER OF SEQ ID NOS: 319  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 9  
; LENGTH: 3930  
; TYPE: DNA  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: Description of Artificial Sequence: GagComplPolmut\_C  
US-10-190-435-9

Query Match 98.1%; Score 2415.6; DB 12; Length 3930;  
Best Local Similarity 99.6%; Pred. No. 0;  
Matches 2434; Conservative 0; Mismatches 4; Indels 6; Gaps 1;

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QY 74 AGGGCGGCGCAAGCGCATCATCAAGTCTTCACTGGCGCAAGGAGGCGCACATCGCCCGCA 133  
Db 1547 AGGGCGGCGCAAGCGCATCATCAAGTCTTCACTGGCGCAAGGAGGCGCACATCGCCCGCA 1606  
QY 134 ACTGCGGCGCGCGCGCAAGAGGCGCTGTGGAAGTGGCGCAAGGAGGCGCACCGATGA 193  
Db 1607 ACTGCGGCGCGCGCGCAAGAGGCGCTGTGGAAGTGGCGCAAGGAGGCGCACCGATGA 1666

194 AGGACTGCACCGAGCGCCAGGCCAATTCTTCCGCGAGGACCTGCGCTTCCCGCAGGSCA 253  
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QY 254 AGGCCCCCGAGTTTCCCGCAGGAGGAAACCGCGCCAAACAGCCCCCAACAGCCCGAGCTGC 313  
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QY 374 TCCCCAGATCACTCTGTGGCAGCGCCCTGTGTAGATCAAGGTGGCGCGCCAGATCA 433  
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QY 494 GCAAGTGAAGCCCAAGATGATCGCGGCGATCGCGGCTTCATCAAGGTGCGCCAGTACG 553  
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QY 1754 ACGAGCTGAAGCACTGACCGAGCGCTGAGAGAGATGCGCATGAGAGCATCTGTACT 1813  
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RESULT 5  
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; Sequence 10, Application US/10190435  
; Publication No. US20030143248A1  
; GENERAL INFORMATION:  
; APPLICANT: ZUR MEGERDE, Jan  
; APPLICANT: BARNETT, Susan W.  
; APPLICANT: LIAN, Ying  
; APPLICANT: ENGELBRECHT, Susan  
; APPLICANT: VAN RENSBERG, Estrelita J.  
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C  
; FILE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF  
; FILE REFERENCE: P18133.003 / 2302-18133  
; CURRENT APPLICATION NUMBER: US/10/190.435  
; CURRENT FILING DATE: 2002-12-30  
; NUMBER OF SEQ ID NOS: 319  
; SOFTWARE: Patentin ver. 2.0  
; SEQ ID NO 10  
; LENGTH: 3930  
; TYPE: DNA  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: Description of Artificial Sequence: GagComplPolimurAtt\_C  
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Query Match 98.0%; Score 2414; DB 12; Length 3930;  
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Db 3401 TGAAGCTGTGTACCTGAGCTGAGAGAGAGCCCATCTGCGCGCCGAGACCTTCTTACCTG 3460
Qy 1994 ACGGCGCCGCGCAACCGCGAGACCAAGATCGGCAAGGCGGCTACGTAACCGACCGGGGCC 2053
Db 3461 ACGGCGCCGCGCAACCGCGAGACCAAGATCGGCAAGGCGGCTACGTAACCGACCGGGGCC 3520
Qy 2054 GGCAGAGATGCTGAGCTGACCGAGACCAACCAACAGAGACCGAGCTGACAGGCTATCC 2113
Db 3521 GGCAGAGATGCTGAGCTGACCGAGACCAACCAACAGAGACCGAGCTGACAGGCTATCC 3580
Qy 2114 AGTGGCCCTGAGAGACAGCGCGACGAGTGAACATCTGACCGACAGCCAGTACGCC 2173
Db 3581 AGTGGCCCTGAGAGACAGCGCGACGAGTGAACATCTGACCGACAGCCAGTACGCC 3640
Qy 2174 TGGGATATATCAGAGCCCGACCGCCAGACAGAGAGAGAGAGTGTGTAACAGATCATAC 2233
Db 3641 TGGGATATATCAGAGCCCGACCGCCAGACAGAGAGAGAGTGTGTAACAGATCATAC 3700
Qy 2234 AGCAGCTGATCAGAGAGAGAGAGTGTACTGAGTGGTGGCCGCCCAAGAGGCGATCG 2293
Db 3701 AGCAGCTGATCAGAGAGAGAGAGTGTACTGAGTGGTGGCCGCCCAAGAGGCGATCG 3760
Qy 2294 GCGGCACGACAGATGCAACAAGCTGTGAGCAGAGGCAATCCGCAAGGTCTCTTCTCG 2353
Db 3761 GCGGCACGACAGATGCAACAAGCTGTGAGCAGAGGCAATCCGCAAGGTCTCTTCTCG 3820
Qy 2354 ACGGATGATGAGGCGGATCTGATCTACAGTACATGAGACGACTGTACGCGGCGACG 2413
Db 3821 ACGGATGATGAGGCGGATCTGATCTACAGTACATGAGACGACTGTACGCGGCGACG 3880
Qy 2414 GCGGCCCTAGATGATTAAGCTTCCCGGGGCTAGACCGGT 2457
Db 3881 GCGGCCCTAGATGATTAAGCTTCCCGGGGCTAGACCGGT 3924

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RESULT 6
US-10-190-435-11
; Sequence 11, Application US/10190435
; Publication No. US20030143248A1
; GENERAL INFORMATION:
; APPLICANT: ZUR MEGEDE, Jan
; APPLICANT: BARNETT, Susan W.
; APPLICANT: LIAN, Ying
; APPLICANT: ENGELBRECHT, Susan
; APPLICANT: VAN RENSBURG, Estrelita J.
; TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES ENCODING ANTIGENIC HIV TYPE C
; TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF
; FILE REFERENCE: P18133.003 / 2302-18133
; CURRENT APPLICATION NUMBER: US/10/190.435
; NUMBER OF SEQ ID NOS: 319
; SOFTWARE: Patentl Ver. 2.0
; SEQ ID NO 11

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; LENGTH: 3930
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: GagComp]Polmutina_C
US-10-190-435-11

Query Match      98.0%; Score 2414; DB 12; Length 3930;
Best Local Similarity 99.5%; Pred. No. 0;
Matches 2433; Conservative 0; Mismatches 5; Indels 6; Gaps 1;

Qy 14 TGGCCGAGGCCATGAGCCAGGCCAACAAGCCCAATCTGATGACAGCGAGCAACTTCA 73
Db 1487 TGGCCGAGGCCATGAGCCAGGCCAACAAGCCCAATCTGATGACAGCGAGCAACTTCA 1546
Qy 74 AGGCCCCCAAGCGCATCATCAAGTGTCTTCAACTGCGGCAAGAGAGGCCACATCGCCGCA 133
Db 1547 AGGCCCCCAAGCGCATCATCAAGTGTCTTCAACTGCGGCAAGAGAGGCCACATCGCCGCA 1606
Qy 134 ACTGCCGAGCCCGCCGAGAGAGGCTGTGGAAGTGGGCAAGAGAGGCCACAGATGA 193
Db 1607 ACTGCCGAGCCCGCCGAGAGAGGCTGTGGAAGTGGGCAAGAGAGGCCACAGATGA 1686
Qy 194 AGGACTGACCGAGCGCCAGGCCAATTCTTCCGCGAGACCTGCTTCCCGAGGCCA 253
Db 1667 AGGACTGACCGAGCGCCAGGCCAATTCTTCCGCGAGACCTGCTTCCCGAGGCCA 1726
Qy 254 AGGCGCGGAGTTCCCGAGGAGAGAGACCGCGCCCAACGCCACGAGCGCGAGCTGC 313
Db 1727 AGGCGCGGAGTTCCCGAGGAGAGAGACCGCGCCCAACGCCACGAGCGCGAGCTGC 1786
Qy 314 AGGTGCGCGGCGACCAACCCCGCAGCGAGCGCGCGCGAGCGCCAGGCACTCTGAACT 373
Db 1787 AGGTGCGCGGCGACCAACCCCGCAGCGAGCGCGCGCGAGCGCCAGGCACTCTGAACT 1846
Qy 374 TCCCCAGATCACCTTGTGAGCGCCCTTGTGAGCATCAAGTGGCGGCCAGATCA 433
Db 1847 TCCCCAGATCACCTTGTGAGCGCCCTTGTGAGCATCAAGTGGCGGCCAGATCA 1906
Qy 434 AGGAGGCGCTGTGAGACAGCGGCGCGAGACACCGTGTGAGAGAGATGAGCTGCGCG 493
Db 1907 AGGAGGCGCTGTGAGACAGCGGCGCGAGACACCGTGTGAGAGAGATGAGCTGCGCG 1966
Qy 494 GCAAGTGAAGCCCAAGATATCGCGGCGATCGCGGCTTATCAAGTGGCGCCAGTACG 553
Db 1967 GCAAGTGAAGCCCAAGATATCGCGGCGATCGCGGCTTATCAAGTGGCGCCAGTACG 2026
Qy 554 ACCGATCTGATGATGATCTGCGGCAAGAGGCAATCGGCACTGTCTGATCGGCCCA 613
Db 2027 ACCGATCTGATGATGATCTGCGGCAAGAGGCAATCGGCACTGTCTGATCGGCCCA 2086
Qy 614 CCCCCGTGAACATCATGAGCGCGCAACATGTGCAACCGAGCTGGGCTGACCTGAACTTC 673
Db 2087 CCCCCGTGAACATCATGAGCGCGCAACATGTGCAACCGAGCTGGGCTGACCTGAACTTC 2146
Qy 674 CCATACGCCCATGAGACCGGTGCGGTGAAGCTGAAGCCCGGATGAGCGGCCCAAG 733
Db 2147 CCATACGCCCATGAGACCGGTGCGGTGAAGCTGAAGCCCGGATGAGCGGCCCAAG 2206
Qy 734 TGAAGCAGTGGCCCTTACCGAGAGAGATCAAGGCTCTGACCGCATCTGCGAGAGGA 793
Db 2207 TGAAGCAGTGGCCCTTACCGAGAGAGATCAAGGCTCTGACCGCATCTGCGAGAGGA 2266
Qy 794 TGAAGAGAGGAGGCAATCAACCAAGTCGGCCCGGAGACCCCTTACCAACCCCGTGT 853
Db 2267 TGAAGAGAGGAGGCAATCAACCAAGTCGGCCCGGAGACCCCTTACCAACCCCGTGT 2326
Qy 854 TCGGCATCAAGAGAGAGAGAGACCAAGTGGCGCAAGCTGTGATCTTCCGCGAGCTGA 913
Db 2327 TCGGCATCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2386
Qy 914 ACAAGCGACCCAGAGACTTGTGAGAGTGAAGCTGGGCAATCCCGACCCCGCGCTGGA 973

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Db 2387 ACAAGCGCACCCAGGAGCTTCTGGAGAGTGCAGTGGGCATCCGCCACCCCGCGGCTGTA 2446  
 QY 974 AGAAGAGAGAGCGTACCGTCTGACGCTGGCGACGCGCTACTTCAGCGTCCCGCTGG 1033  
 Db 2447 AGAAGAGAGAGCGTACCGTCTGACGCTGGCGACGCGCTACTTCAGCGTCCCGCTGG 2506  
 QY 1034 ACGAGGACTTCCGCAAGTACACCGCTTCCACCATCCCGAGCATCAACAACGAGACCCCGG 1093  
 Db 2507 ACGAGGACTTCCGCAAGTACACCGCTTCCACCATCCCGAGCATCAACAACGAGACCCCGG 2566  
 QY 1094 GCATCGCTACCAAGTACAAAGTCTGCTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 1153  
 Db 2567 GCATCGCTACCAAGTACAAAGTCTGCTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 2626  
 QY 1154 AGAGCAGCATGACCAAGTACCAAGTCTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 1213  
 Db 2627 AGAGCAGCATGACCAAGTACCAAGTCTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 2686  
 QY 1214 ACCAGGCCCCCTTGTAGTGGGAGCGACCTGGAGATCGCGCGCGCGCGCGCGCGCGCGCG 1273  
 Db 2687 ACCAGGCCCCCTTGTAGTGGGAGCGACCTGGAGATCGCGCGCGCGCGCGCGCGCGCGCG 2746  
 QY 1274 AGGAGCTGGCAGACCTGCTGGCTGGGGCTTACCACCGCGGACAGAGACGACGAGA 1333  
 Db 2747 AGGAGCTGGCAGACCTGCTGGCTGGGGCTTACCACCGCGGACAGAGACGACGAGA 2806  
 QY 1334 AGGAGCCCCCTTCTGCTGGATGGGCTACGAGCTGCACCCCGCAAGTGGACCGTGCAGC 1393  
 Db 2807 AGGAGCCCCCTTCTGCTGGATGGGCTACGAGCTGCACCCCGCAAGTGGACCGTGCAGC 2860  
 QY 1394 CCATGAGCTGCCGAGAGAGAGTGGACCTGTAACGACATCCAGAGCTGGTGGGCA 1453  
 Db 2861 CCATGAGCTGCCGAGAGAGAGTGGACCTGTAACGACATCCAGAGCTGGTGGGCA 2920  
 QY 1454 AGCTGAACTGGGCGAGCGACATCTACCCCGGATCAAGGTGGCGGAGCTGTGAAGTGC 1513  
 Db 2921 AGCTGAACTGGGCGAGCGACATCTACCCCGGATCAAGGTGGCGGAGCTGTGAAGTGC 2980  
 QY 1514 TGGCGGCGCAAGGCGCTCAGCGACATCTGCGCCCTGACCGAGGAGCGGAGCTGGAGC 1573  
 Db 2981 TGGCGGCGCAAGGCGCTCAGCGACATCTGCGCCCTGACCGAGGAGCGGAGCTGGAGC 3040  
 QY 1574 TGGCGGAGAACCGCGAGATCTTGGCGAGCCCTGTCAGCGCGTGTACTAGACCCCGAGCA 1633  
 Db 3041 TGGCGGAGAACCGCGAGATCTTGGCGAGCCCTGTCAGCGCGTGTACTAGACCCCGAGCA 3100  
 QY 1634 AGGACCTGTGGCGGAGATCCAGAGCAGCGGCGACGACGAGTGCACGATCTACCATCTACC 1693  
 Db 3101 AGGACCTGTGGCGGAGATCCAGAGCAGCGGCGACGACGAGTGCACGATCTACCATCTACC 3160  
 QY 1694 AGGAGCCCTTCAAGAACCTGAAGACCGGCAAGTACGCGCAGATGCGCACCGGCCACACCA 1753  
 Db 3161 AGGAGCCCTTCAAGAACCTGAAGACCGGCAAGTACGCGCAGATGCGCACCGGCCACACCA 3220  
 QY 1754 ACGAGTGAAGCAGCTGACCGAGCGCGTGCAGAGATCGCCATCGAGAGCATCGTGTATCT 1813  
 Db 3221 ACGAGTGAAGCAGCTGACCGAGCGCGTGCAGAGATCGCCATCGAGAGCATCGTGTATCT 3280  
 QY 1814 GGGGCGAGACCCCGAGTTCGCTGCGCTGCCATCAGAGAGGAGCTGGGAGACCTGGTGGGA 1873  
 Db 3281 GGGGCGAGACCCCGAGTTCGCTGCGCTGCCATCAGAGAGGAGCTGGGAGACCTGGTGGGA 3340  
 QY 1874 CCGACTACTGGCAGGCGCACTGGATCCCGAGTGGGAGTTCGTGAACACCGCCCGCCCTGG 1933  
 Db 3341 CCGACTACTGGCAGGCGCACTGGATCCCGAGTGGGAGTTCGTGAACACCGCCCGCCCTGG 3400  
 QY 1934 TGAAGCTGTGGTACCGAGTGGAGAGGAGCCCATCATCGCGCGCGGAGACCTTCTACGTGG 1993  
 Db 3401 TGAAGCTGTGGTACCGAGTGGAGAGGAGCCCATCATCGCGCGCGGAGACCTTCTACGTGG 3460  
 QY 1994 ACGGCGCGCGCAACCGGAGACCAAGATCGCGAAGCGCGGCTACGTGAACGACCGGGGCC 2053  
 Db 3461 ACGGCGCGCGCAACCGGAGACCAAGATCGCGAAGCGCGGCTACGTGAACGACCGGGGCC 3520

QY 2054 GGCAGAGATCGTGGACCTGACCGGAGACCAACCAAGAGACCGAGCTGCAGGCCATCC 2113  
 Db 3521 GGCAGAGATCGTGGACCTGACCGGAGACCAACCAAGAGACCGAGCTGCAGGCCATCC 3580  
 QY 2114 AGTGGCCCTGACGAGCAGCGGAGGTGAACATCGTGCAGCAGCAGCAGTACGCC 2173  
 Db 3581 AGTGGCCCTGACGAGCAGCGGAGGTGAACATCGTGCAGCAGCAGCAGTACGCC 3640  
 QY 2174 TGGGCAATCCAGGCGCCAGCGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 2233  
 Db 3641 TGGGCAATCCAGGCGCCAGCGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 3700  
 QY 2234 AGCAGCTGATCAAGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 2293  
 Db 3701 AGCAGCTGATCAAGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 3760  
 QY 2294 GCGGCAACGAGCAGATCGAAGCTGGTGAAGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 2353  
 Db 3761 GCGGCAACGAGCAGATCGAAGCTGGTGAAGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 3820  
 QY 2354 AGGCAATCCATGGCGGATCGTGTATCTACAGTACATGAGCAGCAGCAGTGTGGGAGCG 2413  
 Db 3821 AGGCAATCCATGGCGGATCGTGTATCTACAGTACATGAGCAGCAGCAGTGTGGGAGCG 3880  
 QY 2414 GCGGCGCTAGGATCGATTAAAGCTTCCCGGGCTAGCACCCGT 2457  
 Db 3881 GCGGCGCTAGGATCGATTAAAGCTTCCCGGGCTAGCACCCGT 3924

RESULT 7

US-10-190-435-58  
 ; Sequence 58, Application US/10190435  
 ; Publication No. US20030143248A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: ZUR MEGEDE, Jan  
 ; APPLICANT: BARNETT, Susan W.  
 ; APPLICANT: LIAN, Ying  
 ; APPLICANT: ENGELBRECHT, Susan  
 ; APPLICANT: VAN RENSBURG, Estrelita J.  
 ; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C  
 ; FILE REFERENCE: PP18133.003 / 2302-18133  
 ; CURRENT APPLICATION NUMBER: US/10/190,435  
 ; CURRENT FILING DATE: 2002-12-30  
 ; NUMBER OF SEQ ID NOS: 319  
 ; SOFTWARE: Patentin Ver. 2.0  
 ; SEQ ID NO 58  
 ; LENGTH: 5184  
 ; TYPE: DNA  
 ; ORGANISM: Artificial Sequence  
 ; FEATURE:  
 ; OTHER INFORMATION: Description of Artificial Sequence: TatRevNefgagQpolina C  
 US-10-190-435-58

Query Match 98.0%; Score 2414; DB 12; Length 5184;  
 Best Local Similarity 99.5%; Pred. No. 0;  
 Matches 2433; Conservative 0; Mismatches 5; Indels 6; Gaps 1;  
 QY 14 TGGCGAGGCCATGAGCCAGGCCACCGAGGCCAATCTGTATGCGGCGAGCAACTTCA 73  
 Db 2741 TGGCGAGGCCATGAGCCAGGCCACCGAGGCCAATCTGTATGCGGCGAGCAACTTCA 2800  
 QY 74 AGGGCCCCAAGCGCATCATCAAGTGTCACTGGGCGAAGAGGGGCGCATCGCCCGCA 133  
 Db 2801 AGGGCCCCAAGCGCATCATCAAGTGTCACTGGGCGAAGAGGGGCGCATCGCCCGCA 2860  
 QY 134 ACTGCGCGCCCCCGCAGAGAGGCGTCTGGAAGTGGCGAAGAGGGCCACCGATCA 193  
 Db 2861 ACTGCGCGCCCCCGCAGAGAGGCGTCTGGAAGTGGCGAAGAGGGCCACCGATCA 2920  
 QY 194 AGGACTGCACCGAGCGCCAGGCGCAACTTCTTCGCGAGGACCTGGCTTCCCGGAGGCA 253

Db	2921	AGGACTGCACCCGAGGCCAGGCGCACTTTCCGCGAGGACTGGCCTTTCCCAAGGCCA	2980
QY	254	AGGCCCGGAGTTTCCCAAGCAGAGAAACCGGCGCAACAAGCCCCACAAGCCGAGCTGC	313
Db	2981	AGGCCCGGAGTTTCCCAAGCAGAGAAACCGGCGCAACAAGCCCCACAAGCCGAGCTGC	3040
QY	314	AGGTGCGCGGCAACAACCCCGGAGGAGGCGCGCGGCGGAGCGGAGGCAACCTGAAT	373
Db	3041	AGGTGCGCGGCAACAACCCCGGAGGAGGCGCGCGGCGGAGCGGAGGCAACCTGAAT	3100
QY	374	TCGCCCAAGTCAACCTGTGTGAGCGGCCCCCGTGTGATCAAGTGTGGCGCGAGATCA	433
Db	3101	TCGCCCAAGTCAACCTGTGTGAGCGGCCCCCGTGTGATCAAGTGTGGCGCGAGATCA	3160
QY	434	AGGAGGCGCTGTGTGACACACCGGCGCGGAGACACCGTGTGAGGAGAAGAGCTGCGCG	493
Db	3161	AGGAGGCGCTGTGTGAGCGGCGCGGAGACACCGTGTGAGGAGAAGAGCTGCGCG	3220
QY	494	GCAAGTGAAGCCCAAGATGATCGGCGGCGATCGGCGCTTCAATCAAGGTGCGCGAGTAC	553
Db	3221	GCAAGTGAAGCCCAAGATGATCGGCGGCGATCGGCGCTTCAATCAAGGTGCGCGAGTAC	3280
QY	554	ACCAATCCGTATCGAGATCTGCGGCGAGAAAGGCCATGGGACCGTGTGATCGGCGCG	613
Db	3281	ACCAATCCGTATCGAGATCTGCGGCGAGAAAGGCCATGGGACCGTGTGATCGGCGCG	3340
QY	614	CCCCCGTAACATCATCGGCGCGCAACATGTGTGACCCAGCTGAGCTGACCCCTGAATTC	673
Db	3341	CCCCCGTAACATCATCGGCGCGCAACATGTGTGACCCAGCTGAGCTGACCCCTGAATTC	3400
QY	674	CCATAGCCCCCATCGAGACCGTGCCCGTGAAGCTGAAGCCCGGCAATGAGCGGCCCAAG	733
Db	3401	CCATAGCCCCCATCGAGACCGTGCCCGTGAAGCTGAAGCCCGGCAATGAGCGGCCCAAG	3460
QY	734	TGAAGCAGTGGGCCCCGTCGACCGAGGAGAAAGATCAAGCCCTGAACCGCATCTTGCAGAGA	793
Db	3461	TGAAGCAGTGGGCCCCGTCGACCGAGGAGAAAGATCAAGCCCTGAACCGCATCTTGCAGAGA	3520
QY	794	TGAGAAAGAGGCGCAAGATCAACAAGTCGCGCCCGAGAACCCCTTACAACAACCCCGCTGT	853
Db	3521	TGAGAAAGAGGCGCAAGATCAACAAGTCGCGCCCGAGAACCCCTTACAACAACCCCGCTGT	3580
QY	854	TGCGCATTAAGAAAGAGACACGACCAAGTGGCGCAAGCTGTGTGACTTCCGAGCTGA	913
Db	3581	TGCGCATTAAGAAAGAGACACGACCAAGTGGCGCAAGCTGTGTGACTTCCGAGCTGA	3640
QY	914	ACAAGCGCACCCAGGACTTCTGGGAGGTGGAGCTGGGCAATCCCCACCCGCGGCTTGA	973
Db	3641	ACAAGCGCACCCAGGACTTCTGGGAGGTGGAGCTGGGCAATCCCCACCCGCGGCTTGA	3700
QY	974	AGAAAGAAAGAGGCGTGAACCGTGTGTGACGTGGGCGACGCTTACTTACGCGTGGCCCTGG	1033
Db	3701	AGAAAGAAAGAGGCGTGAACCGTGTGTGACGTGGGCGACGCTTACTTACGCGTGGCCCTGG	3760
QY	1034	ACGAGGACTTCCGCAAGTACACGCGCTTCAACATCCCGACATCAACAGAGACCCCG	1093
Db	3761	ACGAGGACTTCCGCAAGTACACGCGCTTCAACATCCCGACATCAACAGAGACCCCG	3820
QY	1094	GCAATCCGTACAGTACACGCTGTGCCCGGAGGCTGGAAGGGAGAGCCCAAGATCTTCC	1153
Db	3821	GCAATCCGTACAGTACACGCTGTGCCCGGAGGCTGGAAGGGAGAGCCCAAGATCTTCC	3880
QY	1154	AGACAGAGATACCAAGATCTGTGAGCCCTTCCCGCGCGCGCAACCCGAGATCGTGAAT	1213
Db	3881	AGACAGAGATACCAAGATCTGTGAGCCCTTCCCGCGCGCGCAACCCGAGATCGTGAAT	3940
QY	1214	ACCAAGGCCCCCTGTACGTGGGCGAGACCTGAGATCGGCGACACCGCGCAAGATCG	1273
Db	3941	ACCAAGGCCCCCTGTACGTGGGCGAGACCTGAGATCGGCGACACCGCGCAAGATCG	4000
QY	1274	AGGAGCTTGGCAACACTCTGTGGCGTGGGGCTTCAACACCCCTGACAAAGAGACCGA	1333
Db	4001	AGGAGCTTGGCAACACTCTGTGGCGTGGGGCTTCAACACCCCTGACAAAGAGACCGA	4060

QY	1334	AGGAGCCCCCTTCTCTGTGGATGGGGCTACAGAGCTGCACCCCGACAAATGGACCCGTGCAGC	1394
Db	4061	AGGAGCCCCCTTCTCTGTGCCAT-----CGAGCTGCACCCCGACAAATGGAGCCGTGCAGC	4114
QY	1394	CCATGAGCTGCCGAGAAAGGAGAGCTGGAACCGTGAAGATCCAGATCCAGAGCTGTGTGGCA	1454
Db	4115	CCATGAGCTGCCGAGAAAGGAGAGCTGGAACCGTGAAGATCCAGAGCTGTGTGGCA	4174
QY	1454	AGCTGAATGGGGCCAGCCAGATCTACCCCGGCATCAAGGTGCAGCTGTGTGCAGAGCTGC	1514
Db	4175	AGCTGAATGGGGCCAGCCAGATCTACCCCGGCATCAAGGTGCAGCTGTGTGCAGAGCTGC	4234
QY	1514	TGCGGGGGCCAAAGGCCCTTGACCCGACATCTGTGCCCTTGACCGAGAGAGCCGAGCTGAGC	1574
Db	4235	TGCGGGGGCCAAAGGCCCTTGACCCGACATCTGTGCCCTTGACCGAGAGAGCCGAGCTGAGC	4294
QY	1574	TGGCGGAGAACCGGAGAGATCTGTGGCGAGGCCGTGTGCAGGGGTGTACTACGACCCCGAGA	1634
Db	4295	TGGCGGAGAACCGGAGAGATCTGTGGCGAGGCCGTGTGCAGGGGTGTACTACGACCCCGAGA	4354
QY	1634	AGGACCTGTGTGGCCGAGATCCGAAAGCAGGGGCCACGACCACTGTGACCTTACCAAGATCTAC	1694
Db	4355	AGGACCTGTGTGGCCGAGATCCGAAAGCAGGGGCCACGACCACTGTGACCTTACCAAGATCTAC	4414
QY	1694	AGGAGCCCTTCAAGAACCTGGAAGACCGGCAAGTACGCGCAAGATGTGCACCGCCACACCA	1754
Db	4415	AGGAGCCCTTCAAGAACCTGGAAGACCGGCAAGTACGCGCAAGATGTGCACCGCCACACCA	4474
QY	1754	ACGACGTGAACAGACTGACCGAGGCCGTGTGCAGAAAGATGCGCATGAGAGATCTGTATCT	1814
Db	4475	ACGACGTGAACAGACTGACCGAGGCCGTGTGCAGAAAGATGCGCATGAGAGATCTGTATCT	4534
QY	1814	GGGGCAAGACCCCAAGTTCGGCTGTGCCATCCGAAAGGAACCTGGGAGACCTGTGTGA	1874
Db	4535	GGGGCAAGACCCCAAGTTCGGCTGTGCCATCCGAAAGGAACCTGGGAGACCTGTGTGA	4594
QY	1874	CGGACTATGCGAGAGCAACTGTGATCCCGAGTGGAGTTGTGAACACCCCCCCTGTG	1934
Db	4595	CGGACTATGCGAGAGCAACTGTGATCCCGAGTGGAGTTGTGAACACCCCCCCTGTG	4654
QY	1934	TGAAGCTGTGTACACAGCTGGAAGAGAGCCACATCTGGGCGCGACACTTTACTGTGG	1994
Db	4655	TGAAGCTGTGTACACAGCTGGAAGAGAGCCACATCTGGGCGCGACACTTTACTGTGG	4714
QY	1994	ACGGCGCCCGCAACCGCGAGACCAAGATGTGGCAAGCGCGCTACGTGACCGACCGGAGCC	2054
Db	4715	ACGGCGCCCGCAACCGCGAGACCAAGATGTGGCAAGCGCGCTACGTGACCGACCGGAGCC	4774
QY	2054	GGCAGAGATGTGTAGGCTGTACCGAGACACACCAACCGAAGATCTGAGCTGCAGGCCATCC	2114
Db	4775	GGCAGAGATGTGTAGGCTGTACCGAGACACACCAACCGAAGATCTGAGCTGCAGGCCATCC	4834
QY	2114	AGCTGGGCCCTTGAGAGACAGCGCGCAGAGGTGAACATCTGTGACCGACAGCGCAGTACGCC	2174
Db	4835	AGCTGGGCCCTTGAGAGACAGCGCGCAGAGGTGAACATCTGTGACCGACAGCGCAGTACGCC	4894
QY	2174	TGGGCAATCATTCAGAGCCCAAGCCCGACAAAGCCGAGACCGAGCTGTGAACCAAGATCATCG	2234
Db	4895	TGGGCAATCATTCAGAGCCCAAGCCCGACAAAGCCGAGACCGAGCTGTGAACCAAGATCATCG	4954
QY	2234	AGCAGCTGATTCAGAAAGGAGAGGTGTACCTGTAGCTGGGTGCCCGCCACAAAGGCGATCG	2294
Db	4955	AGCAGCTGATTCAGAAAGGAGAGGTGTACCTGTAGCTGGGTGCCCGCCACAAAGGCGATCG	5014
QY	2294	GCGGCAACGAGCAGATCGACAAAGCTGTGTGACAAAGGCGATCCGCAAGTCTGTTCTGTG	2354
Db	5015	GCGGCAACGAGCAGATCGACAAAGCTGTGTGACAAAGGCGATCCGCAAGTCTGTTCTGTG	5074
QY	2354	ACGGCAATCATTCGGGCGATGTGTACTTACCAATGACATGACAGACCTGTACTGTGGCAGCG	2414
Db	5075	ACGGCAATCATTCGGGCGATGTGTACTTACCAATGACATGACAGACCTGTACTGTGGCAGCG	5134

QY 2414 GGGCCCTAGGATCGATTAAAGCTTCCGGGGCTAGCACCGGT 2457  
Db 5135 GGGCCCTAGGATCGATTAAAGCTTCCGGGGCTAGCACCGGT 5178

RESULT 8  
US-10-190-435-13  
; Sequence 13, Application US/10190435  
; Publication No. US20030143248A1  
; GENERAL INFORMATION:  
; APPLICANT: ZUR MEDEDE, Jan  
; APPLICANT: BARNETT, Susan W.  
; APPLICANT: LIAN, Ying  
; APPLICANT: ENGELBRECHT, Susan  
; APPLICANT: VAN RENSBURG, Estrelita J.  
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C  
; FILE REFERENCE: PP18133.003 / 2302-18133  
; CURRENT APPLICATION NUMBER: US/10/190,435  
; CURRENT FILING DATE: 2002-12-30  
; NUMBER OF SEQ ID NOS: 319  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 13  
; TYPE: DNA  
; LENGTH: 3531  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: Description of Artificial Sequence: GagPolmut\_C  
US-10-190-435-13

Query Match 96.8%; Score 2383.6; DB 12; Length 3531;  
Best Local Similarity 98.8%; Pred. No. 0;  
Matches 2414; Conservative 0; Mismatches 24; Indels 6; Gaps 1;  
  
QY 14 TGGCCGAGGCGCATGAGCGAGGCGCAACACCGAGCGTGTATGTCAGCGAGCAACTTCA 73  
Db 1088 TGGCCGAGGCGCATGAGCGAGGCGCAACACCGAGCGTGTATGTCAGCGAGCAACTTAAAA 1147  
  
QY 74 AGGGCCCCAAGCGATCATCAAGTGTCTTCAACTGCGGCAAGAGGGGCCACATCGCCCGCA 133  
Db 1148 AGGGCCCCAAGCGATCATCAAGTGTCTTCAACTGCGGCAAGAGGGGCCACATCGCCCGCA 1207  
  
QY 134 ACTGCGCGCGCCCGCCGCAAGGGTGTCTGGAAGTGGCGCAAGGAGGGCCACAGATGA 193  
Db 1208 ACTGCGCGCGCCCGCCGCAAGGGTGTCTGGAAGTGGCGCAAGGAGGGCCACAGATGA 1267  
  
QY 194 AGGACTGCAACCGAGCGCGAGCGCAACTTCTTCGCGAGGACCTGGCTTCCCGAGGCA 253  
Db 1268 AGGACTGCAACCGAGCGCGAGCGCAACTTCTTCGCGAGGACCTGGCTTCCCGAGGCA 1327  
  
QY 254 AGGCGCGGAGTTCGCCGAGCAGACCGCGCCACAGCCCGCCAGCGCGAGCTGC 313  
Db 1328 AGGCGCGGAGTTCGCCGAGCAGACCGCGCCACAGCCCGCCAGCGCGAGCTGC 1387  
  
QY 314 AGGTGCGCGCGCAACACCCCGCAGGAGCGCGCGCCGCGCGAGCGCCACCGCTGAAT 373  
Db 1388 AGGTGCGCGCGCAACACCCCGCAGGAGCGCGCGCCGCGCGAGCGCCACCGCTGAAT 1447  
  
QY 374 TCCCGCAGATCACTGTGAGCGCGCCCGCTGTGTAGATCAAGAGTGGCGGCGAGATCA 433  
Db 1448 TCCCGCAGATCACTGTGAGCGCGCCCGCTGTGTAGATCAAGAGTGGCGGCGAGATCA 1507  
  
QY 434 AGGAGCCCTGCTGGACACCGCGCGCGAGACCGCTGTGTGAGGAGATGAGCTGCCG 493  
Db 1508 AGGAGCCCTGCTGGACACCGCGCGCGAGACCGCTGTGTGAGGAGATGAGCTGCCG 1567  
  
QY 494 GCAAGTGGAGGCCAAGATGATCGCGGCGATCGCGGCTTCATCAAGGTGCGCGATAG 553  
Db 1568 GCAAGTGGAGGCCAAGATGATCGCGGCGATCGCGGCTTCATCAAGGTGCGCGATAG 1627  
  
QY 554 ACCAGATCTGTATCGAGATCTGGCGCAAGAGGCCATCGSCACCGTGTATCGGCCCA 613  
Db 1628 ACCAGATCTGTATCGAGATCTGGCGCAAGAGGCCATCGSCACCGTGTATCGGCCCA 1687

QY 614 CCCCGCTGAACATCATCGGCGCGCAATCTCTGACCCAGCTGGGTGCAACCTGAACTTCC 673  
Db 1688 CCCCGCTGAACATCATCGGCGCGCAATCTCTGACCCAGCTGGGTGCAACCTGAACTTCC 1747  
  
QY 674 CCATCAGCCCGCATCGAGACCGTGAAGCTGAAGCCCGGCAATGAGCCCGCATCTCGAGGAG 733  
Db 1748 CCATCAGCCCGCATCGAGACCGTGAAGCTGAAGCCCGGCAATGAGCCCGCATCTCGAGGAG 1807  
  
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QY 794 TGAAGAGAGGAGGAGATCAACATGAGTGGCCCGGCAATGAGCCCGCATCTCGAGGAG 853  
Db 1868 TGAAGAGAGGAGGAGATCAACATGAGTGGCCCGGCAATGAGCCCGCATCTCGAGGAG 1927  
  
QY 854 TCGCCATCAAGAGAGGAGAGACACCAAGTGGCGCAAGCTGTGAGCTTCCGCGAGCTGA 913  
Db 1928 TCGCCATCAAGAGAGGAGAGACACCAAGTGGCGCAAGCTGTGAGCTTCCGCGAGCTGA 1987  
  
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Db 1988 ACAAGCGCACCCAGGACTTCTGGAGGTGACCTGGGCATCCCCACCCCGCGGCTGA 2047  
  
QY 974 AGAAGAGAGAGAGCGTGAACCGTGTGGAGTGGCGAGCGCTTACAGCGTGGCCCTGG 1033  
Db 2048 AGAAGAGAGAGAGCGTGAACCGTGTGGAGTGGCGAGCGCTTACAGCGTGGCCCTGG 2107  
  
QY 1034 AGGAGGACTTTCGCAAGTACACCGCTTCCACCATCCCCAGCATCAACACGAGACCCCCG 1093  
Db 2108 AGGAGGACTTTCGCAAGTACACCGCTTCCACCATCCCCAGCATCAACACGAGACCCCCG 2167  
  
QY 1094 GCATCGCTTACAGTACAACTGTGCTGCCAGGGTGGAGGGGAGCCCGACCATCTTCC 1153  
Db 2168 GCATCGCTTACAGTACAACTGTGCTGCCAGGGTGGAGGGGAGCCCGACCATCTTCC 2227  
  
QY 1154 AGAGCAGCATGACCAAGATCTCTGGAGCGCTTCCGGCGCGCAACCCCGAGATCTGATCT 1213  
Db 2228 AGAGCAGCATGACCAAGATCTCTGGAGCGCTTCCGGCGCGCAACCCCGAGATCTGATCT 2287  
  
QY 1214 ACCAGCGCCCGCTGTACGTGGGCGAGCGACTGGAGATCGGCGAGCACCGCGCAAGATCG 1273  
Db 2288 ACCAGCGCCCGCTGTACGTGGGCGAGCGACTGGAGATCGGCGAGCACCGCGCAAGATCG 2347  
  
QY 1274 AGGAGTGGCGCAAGCACTGTGCTGGGGTTTCAACACCCCGCAAGAGACCAAG 1333  
Db 2348 AGGAGTGGCGCAAGCACTGTGCTGGGGTTTCAACACCCCGCAAGAGACCAAG 2407  
  
QY 1334 AGGAGCGCCCGCTTCTGTGTGGTGGGTAGAGCTGACCCCGACAGTGGACCGTGCAGC 1393  
Db 2408 AGGAGCGCCCGCTTCTGTGTGGTGGGTAGAGCTGACCCCGACAGTGGACCGTGCAGC 2461  
  
QY 1394 CCATCGAGTGGCGCAAGAGAGAGTGGACCGTGAACGACATCCAGAAAGCTGGTGGGA 1453  
Db 2462 CCATCGAGTGGCGCAAGAGAGAGTGGACCGTGAACGACATCCAGAAAGCTGGTGGGA 2521  
  
QY 1454 AGCTGAACTGGCGCGAGCGAGATCTTACCCCGGCAATCAAGGTGGCGAGCTGTGCAAGCTGC 1513  
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Db 2582 TCGCGGCGCGCAAGCGCCCTGACCGAGCATCTGCTGACCCGAGGCGCGAGCTGGAGC 2641  
  
QY 1574 TGGCGGAGAACCGCGAGATCTCTGCGGAGCGCGTGCACGGCGTGTACTACGACCCAGCA 1633  
Db 2642 TGGCGGAGAACCGCGAGATCTCTGCGGAGCGCGTGCACGGCGTGTACTACGACCCAGCA 2701  
  
QY 1634 AGGACCTGTGTGCGCGAGATCTCAGAGAGCGGCGACGACCGAGTGGACCTACAGATCTTACC 1693  
Db 2702 AGGACCTGTGTGCGCGAGATCTCAGAGAGCGGCGACGACCGAGTGGACCTACAGATCTTACC 2761

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QY 1694 AGGAGCCCTTCAAGAACTGAAAGCCGCAAGTACCCAGATGCGCAACCGCCACACCA 1753
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QY 1754 AGGAGCTGAAGAGCTGACCGAGGCCCTGCAAGATCGCCATGGAAGCAATCGATCT 1813
DB 2822 AGGAGCTGAAGAGCTGACCGAGGCCCTGCAAGATCGCCATGGAAGCAATCGATCT 2881
QY 1814 GGGGCAAGACCCCAAGTCCGCGCTGCCCATCCAGAAAGAGACTGGGAGACTGCTGTGA 1873
DB 2882 GGGGCAAGACCCCAAGTCCGCGCTGCCCATCCAGAAAGAGACTGGGAGACTGCTGTGA 2941
QY 1874 CCGACTACTGCGAGGCGCACTTGATCCCGAGTGGAGATTCTGTGAACAACCCGCCCTGG 1933
DB 2942 CCGACTACTGCGAGGCGCACTTGATCCCGAGTGGAGATTCTGTGAACAACCCGCCCTGG 3001
QY 1934 TGAACCTGTGTACCAAGCTGGAAGAGAGCCCATCATGCGCCCGAGACTTCTTACGTGG 1993
DB 3002 TGAACCTGTGTACCAAGCTGGAAGAGAGCCCATCATGCGCCCGAGACTTCTTACGTGG 3061
QY 1994 ACGGCGCCGCCAACCGCGAGAACCAAGATCGGCAAGCGCGCTACGTTGACCCGAGGCGC 2053
DB 3062 ACGGCGCCGCCAACCGCGAGAACCAAGATCGGCAAGCGCGCTACGTTGACCCGAGGCGC 3121
QY 2054 GGCAGAAATCGTGAAGCTTACCGAGCAACCAACCAAGAGCCGAGCTGCAAGGCCATCC 2113
DB 3122 GGCAGAAATCGTGAAGCTTACCGAGCAACCAACCAAGAGCCGAGCTGCAAGGCCATCC 3181
QY 2114 AGCTGGCCCTGAGAGAACAGCCGCGACAGGTGAACATCGTGAACCAACCGCATACGCC 2173
DB 3182 AGCTGGCCCTGAGAGAACAGCCGCGACAGGTGAACATCGTGAACCAACCGCATACGCC 3241
QY 2174 TGGGATCATCCAGGCGCCAGCCGAGCAAGAGCGAGCGAGCTGTGAACCATCATCTCG 2233
DB 3242 TGGGATCATCCAGGCGCCAGCCGAGCAAGAGCGAGCGAGCTGTGAACCATCATCTCG 3301
QY 2234 AGCAGCTCATCAAGAGAGAAAGTGTACTGAGCTGGGTGCGCCGCCCAAGAGGCGATCG 2293
DB 3302 AGCAGCTCATCAAGAGAGAAAGTGTACTGAGCTGGGTGCGCCGCCCAAGAGGCGATCG 3361
QY 2294 GCGGCAAGAGAGATCGAACAGAGTGTGAGAGAGAGGCAATCCGCAAGGTGCTGCTCGG 2353
DB 3362 GCGGCAAGAGAGATCGAACAGAGTGTGAGAGAGAGGCAATCCGCAAGGTGCTGCTCGG 3421
QY 2354 ACGGATCATGAGCGGCAATCGTATCTACAGTACATGAGACGACTGTACCTGTGCGAGCG 2413
DB 3422 ACGGATCATGAGCGGCAATCGTATCTACAGTACATGAGACGACTGTGCGAGCG 3481
QY 2414 GCGGCGCTTAAAGATCGATTAAAGCTTCCCGGGGCTAGCAACCGGT 2457
DB 3482 GCGGCGCTTAAAGATCGATTAAAGCTTCCCGGGGCTAGCAACCGGT 3525

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## RESULT 9

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US-10-190-435-14
; Sequence 14, Application US/10190435
; Publication No. US2003014348A1
; GENERAL INFORMATION:
; APPLICANT: ZUR MEHDE, Jan
; APPLICANT: BARRETT, Susan W.
; APPLICANT: LIAN, Ying
; APPLICANT: ENGBRECHT, Susan
; APPLICANT: VAN RENSBURG, Estrelita J.
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
; TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF
; FILE REFERENCE: P18133.003 / 2302-18133
; CURRENT APPLICATION NUMBER: US/10/190/435
; NUMBER OF SEQ ID NOS: 319
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 14
; LENGTH: 3537
; TYPE: DNA

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; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: GagPolmutAtc_C
US-10-190-435-14

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Query Match          96.7%; Score 2382; DB 12; Length 3537;
Best Local Similarity 98.7%; Pred. No. 0;
Matches 2413; Conservative 0; Mismatches 25; Indels 6; Gaps 1;

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QY 14 TGGCCGAGGCCATGAGCCAGGCGCACAGCCCAATCTGATGACGCAACCTTCA 73
DB 1094 TGGCCGAGGCCATGAGCCAGGCGCACAGCCCAATCTGATGAGCAACTTTAAAA 1153
QY 74 AGGCCCCAAGCGCATCATCAAGTCTTCACTCGCGGAGAGAGGCGCCACATCGCGCGCA 133
DB 1154 AGGCCCCAAGCGCATCATCAAGTCTTCACTCGCGGAGAGAGGCGCCACATCGCGCGCA 1213
QY 134 ACTGCGCGCGCCCGCGAGAGAGGCTGTGAAAGTGTGCGGCAAGAGGCCACAGATGA 193
DB 1214 ACTGCGCGCGCCCGCGAGAGAGGCTGTGAAAGTGTGCGGCAAGAGGCCACAGATGA 1273
QY 194 AGGACTGCACCGAGCGCCAGGCGCACTTCTTCCGCGAGAGACTTGGCTTCCCGAGGCA 253
DB 1274 AGGACTGCACCGAGCGCCAGGCGCACTTCTTCCGCGAGAGACTTGGCTTCCCGAGGCA 1333
QY 254 AGGCGCCGAGATTCCCGAGCAGAGCAACCGCGCAAGGCCACAGCGCGAGGCTGC 313
DB 1334 AGGCGCCGAGATTCCCGAGCAGAGCAACCGCGCAAGGCCACAGCGCGAGGCTGC 1393
QY 314 AGGTGCGGCGGAGACACCCCGCGAGAGCGCGCGCGCGCGAGCGCGCACTGTAACT 373
DB 1394 AGGTGCGGCGGAGACACCCCGCGAGAGCGCGCGCGCGCGCGAGCGCGCACTGTAACT 1453
QY 374 TCCCCAGATCAACCTGTGTGAGAGGCGCCCTGTGTGAGCATTAAGTGGCGCCAGATCA 433
DB 1454 TCCCCAGATCAACCTGTGTGAGAGGCGCCCTGTGTGAGCATTAAGTGGCGCGCGAGATCA 1513
QY 434 AGGAGGCGCTGTGAGACACCGCGCGCGAGCAACCGGTGTGAGAGAGTGAAGCTGCGCG 493
DB 1514 AGGAGGCGCTGTGAGACACCGCGCGCGAGCAACCGGTGTGAGAGAGTGAAGCTGCGCG 1573
QY 494 GCAGTGAAGGCCCAATGATGCGCGCATCGCGCGCTTCAATGAAGTGGCGCAATAG 553
DB 1574 GCAGTGAAGGCCCAATGATGCGCGCATCGCGCGCTTCAATGAAGTGGCGCAATAG 1633
QY 554 ACCAGATCTGATGAGATCTGCGGCGAGAGAGCCATCGGACCGTGTGATCGGCCCA 613
DB 1634 ACCAGATCTGATGAGATCTGCGGCGAGAGAGCCATCGGACCGTGTGATCGGCCCA 1693
QY 614 CCCCCGTGAACATCATCGGCGCGCAACATGTCTGACCCAGCTGGGTGCAACCTTGAACCTTCC 673
DB 1694 CCCCCGTGAACATCATCGGCGCGCAACATGTCTGACCCAGCTGGGTGCAACCTTGAACCTTCC 1753
QY 674 CCATCAGCCCATCATGAGACCGTGTGCGTGAAGCTGAACCCCGCATGAGACCGCCCAAGG 733
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QY 734 TGAAGCAGTGGCCCTGACCGAGAGAGATCAAGGCCCTGACCGCCATCTGCGAGAGGA 793
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QY 794 TGAAGAGAGAGGCAATATCAACAGATCGGCGCGCGAGAACCCCTTACACACCCCGGTGT 853
DB 1874 TGAAGAGAGAGGCAATATCAACAGATCGGCGCGCGAGAACCCCTTACACACCCCGGTGT 1933
QY 854 TCGGCATCAAGAGAGAGAGAGACCAAGTGTGCGCAAGCTGTGTGACTTCCGCGAGCTGA 913
DB 1934 TCGGCATCAAGAGAGAGAGAGAGACCAAGTGTGCGCAAGCTGTGTGACTTCCGCGAGCTGA 1993
QY 914 ACAAGCGCACCCAGAGACTTCTGTGGAGGTGTGAGCTGGGCAATCCCGACCCGCGGCTGGA 973
DB 1994 ACAAGCGCACCCAGAGACTTCTGTGGAGGTGTGAGCTGGGCAATCCCGACCCGCGGCTGGA 2053

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QY 974 AGAAGAAGAGCGGTGACCGCTGTGGAGCTGGCGAGCGCCTACTTTCAGCGTGCCTCTGG 1033
DB 2054 AGAAGAAGAGCGGTGACCGCTGTGGAGCTGGCGAGCGCCTACTTTCAGCGTGCCTCTGG 2113
QY 1034 ACGAGAGCTTCCGCAAGTACACCGCTTCCACCATCCCAAGCATCAACACAGAGACCCCGG 1093
DB 2114 ACGAGAGCTTCCGCAAGTACACCGCTTCCACCATCCCAAGCATCAACACAGAGACCCCGG 2173
QY 1094 GCATCGCTACAGATACACAGCTGTGCTCCAGGGCTGGAAGGCGAGCCCGCATCTTCC 1153
DB 2174 GCATCGCTACAGATACACAGCTGTGCTCCAGGGCTGGAAGGCGAGCCCGCATCTTCC 2233
QY 1154 AGAGCAGCATGACCAAGATCTCTGGAGCCCTTCCGGCGCGCAACCCGAGATCTGTATCT 1213
DB 2234 AGAGCAGCATGACCAAGATCTCTGGAGCCCTTCCGGCGCGCAACCCGAGATCTGTATCT 2293
QY 1214 ACCAGGCCCCCTGTACGTGGGCGAGCGACTTGGAGATCGGCGCAGCAACCGCCAGATCG 1273
DB 2294 ACCAGGCCCCCTGTACGTGGGCGAGCGACTTGGAGATCGGCGCAGCAACCGCCAGATCG 2353
QY 1274 AGGAGCTGGCGAAGCAACCTCTCGGCTGGGGCTTACCAACCCCGCAAGAGACCAAGA 1333
DB 2354 AGGAGCTGGCGAAGCAACCTCTCGGCTGGGGCTTACCAACCCCGCAAGAGACCAAGA 2413
QY 1334 AGGAGCCCCCTTCTCTGTGGATGGGCTACAGAGCTGCACCCCGCAAGTGGACCTGCAGC 1393
DB 2414 AGGAGCCCCCTTCTCTGGAT-----CGAGCTGCACCCCGCAAGTGGACCTGCAGC 2467
QY 1394 CCATCGAGCTGCCGAGAGAGGAGCTGGACCGTGAACGACATCCAGAAAGCTGGTGGCA 1453
DB 2468 CCATCGAGCTGCCGAGAGAGGAGCTGGACCGTGAACGACATCCAGAAAGCTGGTGGCA 2527
QY 1454 AGCTGAACTGGGCGCAGCATCTACCCGGCATCAAGGTGGCGCATCTGCAAGCTGTCAGACTGC 1513
DB 2528 AGCTGAACTGGGCGCAGCATCTACCCGGCATCAAGGTGGCGCATCTGCAAGCTGTCAGACTGC 2587
QY 1514 TCGCGCGCCCAAGGCCCTGACCGACATCGTGCCCTGACCGAGGAGGCGAGCTGGAGC 1573
DB 2588 TCGCGCGCCCAAGGCCCTGACCGACATCGTGCCCTGACCGAGGAGGCGAGCTGGAGC 2647
QY 1574 TGGCCGAGAACCCGAGATCTCTCGGAGCCCGTGCACGCGCTGTACTAGACCCCGAGA 1633
DB 2648 TGGCCGAGAACCCGAGATCTCTCGGAGCCCGTGCACGCGCTGTACTAGACCCCGAGA 2707
QY 1634 AGGACTGTGGCCGAGATCCAGAAAGAGGCGCACAGCTGGAGCTACAGATCTAC 1693
DB 2708 AGGACTGTGGCCGAGATCCAGAAAGAGGCGCACAGCTGGAGCTACAGATCTAC 2767
QY 1694 AGGAGCCCTTCAAGAACCTGAAGACCGGCAAGTACGCGCAAGATCGCACCGCCACCA 1753
DB 2768 AGGAGCCCTTCAAGAACCTGAAGACCGGCAAGTACGCGCAAGATCGCACCGCCACCA 2827
QY 1754 ACGACTGAAGCAGCTGACCGAGGCGGTGAGAAAGATCGCCATGAGAGATCGTATCT 1813
DB 2828 ACGACTGAAGCAGCTGACCGAGGCGGTGAGAAAGATCGCCATGAGAGATCGTATCT 2887
QY 1814 GGGGCAAGACCCCAAGTTCGCGCTGCGCATCAGAGAGGACCTGGAGACCTGTGGA 1873
DB 2888 GGGGCAAGACCCCAAGTTCGCGCTGCGCATCAGAGAGGAGACCTGGAGACCTGTGGA 2947
QY 1874 CCGACTACTTGGCAGGCGCACCTGTGATCCCGAGTGGAGTTCTGTGAACACCCCGCCCTGG 1933
DB 2948 CCGACTACTTGGCAGGCGCACCTGTGATCCCGAGTGGAGTTCTGTGAACACCCCGCCCTGG 3007
QY 1934 TGAAGCTGTGGTACCAAGCTGGAAGAGGCCCATCATCGCGCGCGAGACCTTCTACGTGG 1993
DB 3008 TGAAGCTGTGGTACCAAGCTGGAAGAGGCCCATCATCGCGCGCGAGACCTTCTACGTGG 3067
QY 1994 ACGCGCGCGCAACCGGAGACCAAGATCGGCAAGCGCGCTACGTGACCGACCGGGGCC 2053
DB 3068 ACGCGCGCGCAACCGGAGACCAAGATCGGCAAGCGCGCTACGTGACCGACCGGGGCC 3127
QY 2054 GGCAGAGATCGTGAGCGCTGACCGAGACCAACCAAGAGACCGAGATCGAGGCGCATCC 2113
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DB 3128 GGCAGAGATCGTGAGCTGTACCGAGACCAACCAAGAGACCGAGCTGCAGGGCCATCC 3187
QY 2114 AGCTGGCCCTCGAGACAGCGGCGAGGCTGAACATCGTGAACAGCAGCAGTACGCC 2173
DB 3188 AGCTGGCCCTCGAGACAGCGGCGAGGCTGAACATCGTGAACAGCAGCAGTACGCC 3247
QY 2174 TGGGCATCATCCAGGCCCGAGCCCGCAAGAGAGGAGGAGCTGTGTGAACAGATCATCG 2233
DB 3248 TGGGCATCATCCAGGCCCGAGCCCGCAAGAGAGGAGGAGCTGTGTGAACAGATCATCG 3307
QY 2234 AGCAGCTCATCAAGAGAGAGGCTGTACCTGAGCTGGGTGCCCGCCACAGGGCATCG 2293
DB 3308 AGCAGCTCATCAAGAGAGGAGGCTGTACCTGAGCTGGGTGCCCGCCACAGGGCATCG 3367
QY 2294 CGGGCAACGAGCAGATCGACAAAGCTGTGTGAAGAGGCGATCGCAAGGTGCTTCTTGG 2353
DB 3368 CGGGCAACGAGCAGATCGACAAAGCTGTGTGAAGAGGCGATCGCAAGGTGCTTCTTGG 3427
QY 2354 ACGGCATCGATGGCGGCGATCGTGATCTACAGTACATGAGACCTGTAGTGGCAGCG 2413
DB 3428 ACGGCATCGATGGCGGCGATCGTGATCTACAGTACATGAGACCTGTAGTGGCAGCG 3487
QY 2414 GCGGCCCTTAGGATCGATTAAAGCTTCCCGGGGCTAGCACCGGT 2457
DB 3488 GCGGCCCTTAGGATCGATTAAAGCTTCCCGGGGCTAGCACCGGT 3531

RESULT 10
US-10-190-435-15
; Sequence 15, Application US/10190435
; Publication No. US20030143248A1
; GENERAL INFORMATION:
; APPLICANT: ZUR NEGRDE, Jan
; APPLICANT: BARNETT, Susan W.
; APPLICANT: LIAN, Ying
; APPLICANT: ENGELBRECHT, Susan
; APPLICANT: VAN RENSBURG, Estrelita J.
; TITLE OF INVENTION: POLYPEPTIDES ENCODING ANTIGENIC HIV TYPE C
; FILE REFERENCE: PP18133.003 / 2302-18133
; CURRENT APPLICATION NUMBER: US/10/190,435
; NUMBER OF SEQ ID NOS: 319
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 15
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: GagPolmutIna_C
US-10-190-435-15

Query Match 96.7%; Score 2382; DB 12; Length 3537;
Best Local Similarity 98.7%; Pred. No. 0;
Matches 2413; Conservative 0; Mismatches 25; Indels 6; Gaps 1;

QY 14 TGGCGAGGCGCATGAGCCAGGCGCACCGAGCCCAACATCTCTGATGAGCGCAGCACTTCA 73
DB 1094 TGGCGAGGCGCATGAGCCAGGCGCACCGAGCCCAACATCTCTGATGAGAGAGCAACTTTAAA 1153
QY 74 AGGGCCCCAAGCGCATCATCAAGTCTTCACTGCGGAAGGAGGCGCACATCGCCCGCA 133
DB 1154 AGGGCCCCAAGCGCATCATCAAGTCTTCACTGCGGAGGAGGCGCCACATCGCCCGCA 1213
QY 134 ACTGCGCGCGCCCGCCAGAGAGGCGTGTGTGAAGTGGCGCAAGGAGGCGCCACAGATCA 193
DB 1214 ACTGCGCGCGCCCGCCAGAGAGGCGTGTGTGAAGTGGCGCAAGGAGGCGCCACAGATCA 1273
QY 194 AGGACTGCAACGAGCGCCAGGCGCAACTTCTTCGCGAGGACCTTGGCTTCCCGCAGGGA 253
DB 1274 AGGACTGCAACGAGCGCCAGGCGCAACTTCTTCGCGAGGACCTTGGCTTCCCGCAGGGA 1333
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QY	254	AAGGCCGCGAGTTCCCCAGCGAGGAGAACCGCGCCAAAGCCCCCAACAGCCGAGCTGC	313
Db	1334	AAGCCCGCGAGTTCCCCAGCGAGGAGAACCGCGCCAAAGCCCCCAACAGCCGAGCTGC	1393
QY	314	AGTGCGCAGCCACAACCCCGCAGAGAGCGCGCGCCGAGCGCCAGGGCACTCGAATCT	373
Db	1394	AGTGCGCAGCCACAACCCCGCAGAGAGCGCGCGCCGAGCGCCAGGGCACTCGAATCT	1455
QY	374	TCCCCAAGATCAACCTGTGGCAAGCGCCCTGTGTAGCATCAAGGTGGCGGCGAGATCA	433
Db	1454	TCCCCAAGATCAACCTGTGGCAAGCGCCCTGTGTAGCATCAAGGTGGCGGCGAGATCA	1513
QY	434	AGAGAGCCCTGTGGACACCCGCGCGACACACCGTGTGGAGAGATGAGCTTCGCCG	493
Db	1514	AGAGAGCCCTGTGGACACCCGCGCGACACACCGTGTGGAGAGATGAGCTTCGCCG	1573
QY	494	GCAAGTGAAGCCCAAGATGATCGCGGATCGCGGGCTTCATCAAGTGTGCGCAGTACG	553
Db	1574	GCAAGTGAAGCCCAAGATGATCGCGGATCGCGGGCTTCATCAAGTGTGCGCAGTACG	1633
QY	554	ACCAATCCTGATCGAGATTCGCGGCAAGAGCCATGGGCAACCTGTGTATCGGCCCA	613
Db	1634	ACCAATCCTGATCGAGATTCGCGGCAAGAGCCATGGGCAACCTGTGTATCGGCCCA	1693
QY	614	CCCCGTGAACATCATCGCGCGCACATCTGATCCAGCTGGGTGCACCTGAACTTCC	673
Db	1694	CCCCGTGAACATCATCGCGCGCACATCTGATCCAGCTGGGTGCACCTGAACTTCC	1753
QY	674	CCATAGGCCCATCGAGACCGGTGCCGTGAAGCTGAAGCCCGGATGAGCGGCCCAAGG	733
Db	1754	CCATAGGCCCATCGAGACCGGTGCCGTGAAGCTGAAGCCCGGATGAGCGGCCCAAGG	1813
QY	734	TGAAGCAGTGGCCCTGTGACCGAGGAGAGATCAAGGCGCTGACCGCCATCTGCAGAGGA	793
Db	1814	TGAAGCAGTGGCCCTGTGACCGAGGAGAGATCAAGGCGCTGACCGCCATCTGCAGAGGA	1873
QY	794	TGGAGAGAGAGGGCAAGTACACCAAGATCGCCCCGAGAACCCCTTACAACACCCCGTGT	853
Db	1874	TGGAGAGAGAGGGCAAGTACACCAAGATCGCCCCGAGAACCCCTTACAACACCCCGTGT	1933
QY	854	TCGCATCAAGAGAGAGACAGACCAAGTGGCGCAACTGTGTGACTTCCGCGAGCTGA	913
Db	1934	TCGCATCAAGAGAGAGACAGACCAAGTGGCGCAACTGTGTGACTTCCGCGAGCTGA	1993
QY	914	ACAAAGCACAACAGACTTCTTGGAGATGTACAGCTGGAGATCCCCACCCCGCGAGCTGA	973
Db	1994	ACAAAGCACAACAGACTTCTTGGAGATGTACAGCTGGAGATCCCCACCCCGCGAGCTGA	2053
QY	974	AGAGAGAAAGAGGTGACCGGTGTGACGTGGAGCGTGGAGCGCTTACTTCAAGCTGTGCCCTGG	1033
Db	2054	AGAGAGAAAGAGGTGACCGGTGTGACGTGGAGCGTGGAGCGCTTACTTCAAGCTGTGCCCTGG	2113
QY	1034	ACGAGGACTTCGCAAGTACACCGCTTACCATCTCCAGCATCAACAACAGACACCCCG	1093
Db	2114	ACGAGGACTTCGCAAGTACACCGCTTACCATCTCCAGCATCAACAACAGACACCCCG	2173
QY	1094	GCAATCCGTACCAATCAACGTGTCTGCCCGCAGGGCTGGAAGGCGACGCCCAAGACTTTC	1153
Db	2174	GCAATCCGTACCAATCAACGTGTCTGCCCGCAGGGCTGGAAGGCGACGCCCAAGACTTTC	2233
QY	1154	AGACAGAGATACCAAGATCTGTGAGCCCTTCCGGCGCCGGAACCCCGAGATCGTGAATCT	1213
Db	2234	AGACAGAGATACCAAGATCTGTGAGCCCTTCCGGCGCCGGAACCCCGAGATCGTGAATCT	2293
QY	1214	ACCAAGCCCCCTGTAGTGGGCAAGCACTTGAAGATGAGCCAGCACCGCGCCCAAGATCG	1273
Db	2294	ACCAAGCCCCCTGTAGTGGGCAAGCACTTGAAGATGAGCCAGCACCGCGCCCAAGATCG	2353
QY	1274	AGGAGCTGCGCAACACCTGTGGCGTGGGGCTTCAACAACCCCGCAAGAGAGACAGA	1333
Db	2354	AGGAGCTGCGCAACACCTGTGGCGTGGGGCTTCAACAACCCCGCAAGAGAGACAGA	2413
QY	1334	AGGAGCCCCCTTCTGTGATGGGCTTACAGACTGCACCCCGCAAGTGAACCTGTGAGC	1393

Db	2414	AGAGACCCCCCTTCTCTGCCCCAT-----CGAGCTGCACCCCGACAAAGTGACCCGTGACGC	2467
QY	1394	CCATGAGACTGCCGAGAGAGAGCTGGACCCGTGAAACGACATCCAGAACTGGTGGACA	1455
Db	2468	CCATGAGACTGCCGAGAGAGAGAGCTGGACCCGTGAAACGACATCCAGAACTGGTGGACA	2527
QY	1454	AGCTGAATCGGGCCAGCCAGATCTAACCCCGGCATCAAGGTGCGCAGCTGGTCGAACTGC	1513
Db	2528	AGCTGAATCGGGCCAGCCAGATCTAACCCCGGCATCAAGGTGCGCAGCTGGTCGAACTGC	2587
QY	1514	TGCGGGGGGCCAAGGCCCTTGAACCGACATCTGTGCCCTTGAACCGAGAGGGCCGACTGGAGC	1577
Db	2558	TGCGGGGGGCCAAGGCCCTTGAACCGACATCTGTGCCCTTGAACCGAGAGGGCCGACTGGAGC	2647
QY	1574	TGCGCGAAGAACCGCGAGATCTGTGCGCGAGCCCGGTGACGGGGTGTACTAGACCCACACA	1633
Db	2648	TGCGCGAAGAACCGCGAGATCTGTGCGCGAGCCCGGTGACGGGGTGTACTAGACCCACACA	2707
QY	1634	AGGACCTGTGTGGCCGAGATCCAGAACGAGGGCCACGACCAAGTGAACCTTACCAATCTAAC	1693
Db	2708	AGGACCTGTGTGGCCGAGATCCAGAACGAGGGCCACGACCAAGTGAACCTTACCAATCTAAC	2767
QY	1694	AGGAGCCCTTCAAGAACCTTGAAGACCGGCAAGTACGGCAAGATGGACACGGCCACACCA	1753
Db	2768	AGGAGCCCTTCAAGAACCTTGAAGACCGGCAAGTACGGCAAGATGGACACGGCCACACCA	2827
QY	1754	ACGACGTGAAGCAGCTGACCGAGGCCGTGCGAAGATTCGCCATGAGAGCATCGTATCT	1813
Db	2828	ACGACGTGAAGCAGCTGACCGAGGCCGTGCGAAGATTCGCCATGAGAGCATCGTATCT	2887
QY	1814	GGGGGAGAGACCCCAAGTTCGGCCCTGGCCATCCGAGAGAGACCTTGGAGACCTGTGTGA	1873
Db	2888	GGGGGAGAGACCCCAAGTTCGGCCCTGGCCATCCGAGAGAGACCTTGGAGACCTGTGTGA	2947
QY	1874	CCGACTACTGGCAGAGCCACCTTGATTCGCCAGTGGAGTTCTGTAAACACCCCCCTCTGG	1933
Db	2948	CCGACTACTGGCAGAGCCACCTTGATTCGCCAGTGGAGTTCTGTAAACACCCCCCTCTGG	3007
QY	1934	TGAAGCTGTGTATCAGAGTGGAGAGAGGCCCATATCGGGCCGAGACCTTCTACGTGG	1993
Db	3008	TGAAGCTGTGTATCAGAGTGGAGAGAGGCCCATATCGGGCCGAGACCTTCTACGTGG	3067
QY	1994	ACGGCGCGCCCAACCGCAGACCAAGATTCGCGCAAGCGCGGTACGTGACCGACCGGGGCC	2057
Db	3068	ACGGCGCGCCCAACCGCAGACCAAGATTCGCGCAAGCGCGGTACGTGACCGACCGGGGCC	3127
QY	2054	GGCGAAGATGTGTAGCTTGAACCGAGACCAACCAACGAAAGACCGAGCTGAGGCCATTC	2113
Db	3128	GGCGAAGATGTGTAGCTTGAACCGAGACCAACCAACGAAAGACCGAGCTGAGGCCATTC	3187
QY	2114	AGCTGGCCCTTGCAGAGACAGCGGCGAGGAGGAAATCTGTGACCGACAGCCAGTAAACGCC	2173
Db	3188	AGCTGGCCCTTGCAGAGACAGCGGCGAGGAGGAAATCTGTGACCGACAGCCAGTAAACGCC	3247
QY	2174	TGGGCATCATCAGAGGCCCAAGCCCGACAAAGACGAGACGAGCTGTGAACCAAGATCATCG	2233
Db	3248	TGGGCATCATCAGAGGCCCAAGCCCGACAAAGACGAGACGAGCTGTGAACCAAGATCATCG	3307
QY	2234	AGCAGCTGATCAABAAGAGAAAGGTGTACTGTAGCTGGGTGCCGCCCAAGGGCATCG	2293
Db	3308	AGCAGCTGATCAABAAGAGAAAGGTGTACTGTAGCTGGGTGCCGCCCAAGGGCATCG	3367
QY	2294	GCGGCAACGAGCAGATGACAAGGTGTGTGACAAGGGCATTCGCAAGGTGTCTCTGG	2353
Db	3368	GCGGCAACGAGCAGATGACAAGGTGTGTGACAAGGGCATTCGCAAGGTGTCTCTGG	3427
QY	2354	ACGGCATTCGATGGGGGCTGTGTATCTAACAGTACATGACAGACCTGTAGCTGGGCAAGC	2413
Db	3428	ACGGCATTCGATGGGGGCTGTGTATCTAACAGTACATGACAGACCTGTAGCTGGGCAAGC	3487
QY	2414	GCGGCCTAGATCGATTAAAGCTTCCCGGGCTGTGACCCGGT	2457



Db 3488 GGGCCCTAGGATCGATTAAAGCTTCCCGGGCTAGCACCGGT 3531

## RESULT 11

US-10-190-435-12  
; Sequence 12, Application US/10190435  
; Publication No. US20030143248A1  
; GENERAL INFORMATION:  
; APPLICANT: ZUR MEGEDE, Jan  
; APPLICANT: BARNETT, Susan W.  
; APPLICANT: LIAN, Ying  
; APPLICANT: ENGELBRECHT, Susan  
; APPLICANT: VAN RENSBURG, Estrelita J.  
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C  
; FILE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF  
; FILE REFERENCE: P18133.003 / 2302-18133  
; CURRENT APPLICATION NUMBER: US/10/190,435  
; CURRENT FILING DATE: 2002-12-30  
; NUMBER OF SEQ ID NOS: 319  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 12  
; LENGTH: 5145  
; TYPE: DNA  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: Description of Artificial Sequence:  
; OTHER INFORMATION: GagCompPolmutInatRevNef\_C  
US-10-190-435-12

Query Match 96.7%; Score 2381; DB 12; Length 5145;  
Best Local Similarity 99.5%; Pred. No. 0;  
Matches 2400; Conservative 0; Mismatches 5; Indels 6; Gaps 1;

QY 14 TGCGCGAGGCGATGAGCGAGGCCACAGCGCCAACTCTGTGTCAGCGCGAGCAACTTCA 73  
DB 1487 TGCGCGAGGCGATGAGCGAGGCCACAGCGCCAACTCTGTGTCAGCGCGAGCAACTTCA 1546  
QY 74 AGGGCCCAAGCGCATCATCAAGTGTCTCAACTGCGGCAAGGAGGGCCACATCGCCCGCA 133  
DB 1547 AGGGCCCAAGCGCATCATCAAGTGTCTCAACTGCGGCAAGGAGGGCCACATCGCCCGCA 1606  
QY 134 ACTGCGCGCGCCCGCGAGAGGGTGTGTGAAGTGTGCGCAAGGAGGGCCACAGATGA 193  
DB 1607 ACTGCGCGCGCCCGCGAGAGGGTGTGTGAAGTGTGCGCAAGGAGGGCCACAGATGA 1666  
QY 194 AGGACTGCAACCGAGCGCGAGCGCAACTTCTTCGCGAGGACCTGGCTTCCCGCAGGGCA 253  
DB 1667 AGGACTGCAACCGAGCGCGAGCGCAACTTCTTCGCGAGGACCTGGCTTCCCGCAGGGCA 1726  
QY 254 AGGCGCGAGTTCCTCCAGCGAGCAGAAACCGCGCCCAACAGCCCAAGCGCGAGCTGC 313  
DB 1727 AGGCGCGAGTTCCTCCAGCGAGCAGAAACCGCGCCCAACAGCCCAAGCGCGAGCTGC 1786  
QY 314 AGGTGCGCGCGACACCGCGAGCGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 373  
DB 1787 AGGTGCGCGCGACACCGCGAGCGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 1846  
QY 374 TCCCGCGAGTCACTCTGTGGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 433  
DB 1847 TCCCGCGAGTCACTCTGTGGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 1906  
QY 434 AGGAGCGCTGTGTGACACCG 493  
DB 1907 AGGAGCGCTGTGTGACACCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 1966  
QY 494 GCAAGTGGAGCCCAAGATGATCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 553  
DB 1967 GCAAGTGGAGCCCAAGATGATCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 2026  
QY 554 ACCAGATCTGTATCGAGATCTGCGCAAGAGGCCATCGGACCGTGTGATCGGCGCGCG 613  
DB 2027 ACCAGATCTGTATCGAGATCTGCGCAAGAGGCCATCGGACCGTGTGATCGGCGCGCG 2086

QY 614 CCCCCGTGAACATCATCGCGCGCAACATGCTGACCCAGCTGGGCTGCACCCCTGAACCTTCC 673  
DB 2087 CCCCCGTGAACATCATCGCGCGCAACATGCTGACCCAGCTGGGCTGCACCCCTGAACCTTCC 2146  
QY 674 CCATCAGCCCCCATCGAGACCGTGCCTGGAAGCTGAAGCCCGCGCATCGAGCGGCCCAAGG 733  
DB 2147 CCATCAGCCCCCATCGAGACCGTGCCTGGAAGCTGAAGCCCGCGCATCGAGCGGCCCAAGG 2206  
QY 734 TGAAGCAGTGGCCCCCTGACCGAGGAGAGATCAAGAGCCCTGACCGGCATCTGCGAGGAGA 793  
DB 2207 TGAAGCAGTGGCCCCCTGACCGAGGAGAGATCAAGAGCCCTGACCGGCATCTGCGAGGAGA 2266  
QY 794 TGAAGCAGTGGCCCCCTGACCGAGGAGAGATCAAGAGCCCTGACCGGCATCTGCGAGGAGA 853  
DB 2267 TGAAGCAGTGGCCCCCTGACCGAGGAGAGATCAAGAGCCCTGACCGGCATCTGCGAGGAGA 2326  
QY 854 TGCCTCATGAAGAGAGGAGCAGCACCAGTGGCGCAAGCTGTGTGACTTCCGCGAGCTGA 913  
DB 2327 TGCCTCATGAAGAGAGGAGCAGCACCAGTGGCGCAAGCTGTGTGACTTCCGCGAGCTGA 2386  
QY 914 ACAAGCGCACCCAGGACTTCTTGGGAGGTGACGTGGGCTATCCCCACCGCGCGCGCTGA 973  
DB 2387 ACAAGCGCACCCAGGACTTCTTGGGAGGTGACGTGGGCTATCCCCACCGCGCGCGCTGA 2446  
QY 974 AGAAGAGAGAGCGGTGACCGTGTGAGCGTGGCGAGCGCTACTTTCAGCGTCCCGCTGG 1033  
DB 2447 AGAAGAGAGAGCGGTGACCGTGTGAGCGTGGCGAGCGCTACTTTCAGCGTCCCGCTGG 2506  
QY 1034 AGAGAGCTTCCGCAAGTATACCGGCTTCCATCCCCAGCATCAACAACGAGACCCCCG 1093  
DB 2507 AGAGAGCTTCCGCAAGTATACCGGCTTCCATCCCCAGCATCAACAACGAGACCCCCG 2566  
QY 1094 GCATCGCTTACAGTACACGTGCTGCCCGAGGGTGTGAAGGGCAGCCCGAGGATCTTCC 1153  
DB 2567 GCATCGCTTACAGTACACGTGCTGCCCGAGGGTGTGAAGGGCAGCCCGAGGATCTTCC 2626  
QY 1154 AGAGCAGCATGACCAAGATCTTGGAGCGCTTCCGCGCGCGCAACCCCGAGATCTGATCT 1213  
DB 2627 AGAGCAGCATGACCAAGATCTTGGAGCGCTTCCGCGCGCGCAACCCCGAGATCTGATCT 2686  
QY 1214 ACCAGCCCCCTGTATGTTGGCAGCAGCTTGGAGATCGGCGAGCACCGCGCAAGATCG 1273  
DB 2687 ACCAGCCCCCTGTATGTTGGCAGCAGCTTGGAGATCGGCGAGCACCGCGCAAGATCG 2746  
QY 1274 AGGAGTGGCGAGCACCTGCTGCGTGGGGTTCACACCCCGCGAGAGAGACACAGA 1333  
DB 2747 AGGAGTGGCGAGCACCTGCTGCGTGGGGTTCACACCCCGCGAGAGAGACACAGA 2806  
QY 1334 AGGAGCCCCCTTCTGTGGATGGGTACGAGTGCACCCCGAGAGTGGACCGTGCAGC 1393  
DB 2807 AGGAGCCCCCTTCTGTGGATGGGTACGAGTGCACCCCGAGAGTGGACCGTGCAGC 2860  
QY 1394 CCATCGAGTGGCGAGAGAGAGAGTGGACCGTGAAGACATCCAGAGCTGTGTGGGCA 1453  
DB 2861 CCATCGAGTGGCGAGAGAGAGTGGACCGTGAAGACATCCAGAGCTGTGTGGGCA 2920  
QY 1454 AGCTGAATGTGGCGAGCAGATCTACCGCGCATCAAGTGGCGCGAGCTGTGAGAGCTGC 1513  
DB 2921 AGCTGAATGTGGCGAGCAGATCTACCGCGCATCAAGTGGCGCGAGCTGTGAGAGCTGC 2980  
QY 1514 TGGCGGGCGCGCAAGGCCCTGACCGCATCTGTGCGCGCTGACCGAGGAGCGCGAGCTGGAGC 1573  
DB 2981 TGGCGGGCGCGCAAGGCCCTGACCGCATCTGTGCGCGCTGACCGAGGAGCGCGAGCTGGAGC 3040  
QY 1574 TGGCGCGAAGACCGCGAGATCTTGTGCGAGCGCGTGAACCGGCGTGTACTACGACCCAGCA 1633  
DB 3041 TGGCGCGAAGACCGCGAGATCTTGTGCGAGCGCGTGAACCGGCGTGTACTACGACCCAGCA 3100  
QY 1634 AGGAGCTGTGGCGAGATCTCAGAGCAGGCGCGAGCAGTGTGACCTTACAGATCTTACC 1693  
DB 3101 AGGAGCTGTGGCGAGATCTCAGAGCAGGCGCGAGCAGTGTGACCTTACAGATCTTACC 3160  
QY 1694 AGGAGCTTCAAGAACTTGAAGACCGGCAAGTACGCCAAGATGGCGACCGCGCCACACCA 1753

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Db      3161 AGGAGCCCTTCAAGAACCTGAAAGACCGGAAAGTACGCAAGTGGCAACCGCCACACCA 3220
Qy      1754 ACGAGGTGAGCAGTGAACCGGAGCGGTCAGAAATGCGCATGAGAGCATGCGATCT 1813
Db      3221 ACGAGGTGAGCAGTGAACCGGAGCGGTCAGAAATGCGCATGAGAGCATGCGATCT 3280
Qy      1814 GGGGCAAGACCCCAAGTCCCGCTGCGCATCAGAAAGAGACCTGGAGACCTGGTGA 1873
Db      3281 GGGGCAAGACCCCAAGTCCCGCTGCGCATCAGAAAGAGACCTGGAGAGCTGGTGA 3340
Qy      1874 CCGACTACTGGCAGGCGCACCTGGATCCCGAGTGGGAGTGGTGAACCCCCCTGG 1933
Db      3341 CCGACTACTGGCAGGCGCACCTGGATCCCGAGTGGGAGTGGTGAACCCCCCTGG 3400
Qy      1934 TGAAGCTGTGTACAGCTGGAGAGAGAGAGCCCATATGGGCGGAGACCTTCTACGTGG 1993
Db      3401 TGAAGCTGTGTACAGCTGGAGAGAGAGAGCCCATATGGGCGGAGACCTTCTACGTGG 3460
Qy      1994 ACGGCGCCCGCAACCGCGAGACCAAGATCGGCAAGGCGGCTACGTGACCGACCGGAGCC 2053
Db      3461 ACGGCGCCCGCAACCGCGAGACCAAGATCGGCAAGGCGGCTACGTGACCGACCGGAGCC 3520
Qy      2054 GCGCAAGATCTGTAGCTTGAACCGAGACCAACCAAGAGACCGAGCTGCAAGGCTATCC 2113
Db      3521 GCGCAAGATCTGTAGCTTGAACCGAGACCAACCAAGAGACCGAGCTGCAAGGCTATCC 3580
Qy      2114 AGCTGGCCCTGAGAGACAGCGGACGAGGTGAACATGATGACCGACAGCGAGTACGCGCC 2173
Db      3581 AGCTGGCCCTGAGAGACAGCGGACGAGGTGAACATGATGACCGACAGCGAGTACGCGCC 3640
Qy      2174 TGGGATCATCATCAGGCGCCAGCCCGACCAAGAGCGAGAGCGAGTGTGAACCATCATCG 2233
Db      3641 TGGGATCATCATCAGGCGCCAGCCCGACCAAGAGCGAGAGCGAGTGTGAACCATCATCG 3700
Qy      2234 AGCAGCTGATCAAGAGAGAGAGAGTGTACCTGAGCTGGGTGCGCCGCCCAAGAGGCAATCG 2293
Db      3701 AGCAGCTGATCAAGAGAGAGAGAGTGTACCTGAGCTGGGTGCGCCGCCCAAGAGGCAATCG 3760
Qy      2294 GCGGCAACGAGCAGATCGACAAAGCTGTAGCAAGGAGCATCGCAAGGTGCTGTCTCGG 2353
Db      3761 GCGGCAACGAGCAGATCGACAAAGCTGTAGCAAGGAGCATCGCAAGGTGCTGTCTCGG 3820
Qy      2354 ACGGCATGATGCGCGGATCGTATCTACAGTACATGAGAGAGAGCTGTACGTGGCAAGCG 2413
Db      3821 ACGGCATGATGCGCGGATCGTATCTACAGTACATGAGAGAGAGCTGTACGTGGCAAGCG 3880
Qy      2414 GCGGCGCTAGG 2424
Db      3881 GCGGCGCTAGG 3891

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RESULT 12
US-10-190-435-48
; Sequence 48, Application US/10190435
; Publication No. US20030143248A1
; GENERAL INFORMATION:
; APPLICANT: ZUR MEHDE, Jan
; APPLICANT: BARNETT, Susan W.
; APPLICANT: LIAN, Ying
; APPLICANT: ENGELBRECHT, Susan
; APPLICANT: VAN KENSBURG, Estrelita J.
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
; FILE REFERENCE: P1813.003 / 2302-1813
; CURRENT APPLICATION NUMBER: US/10/190,435
; CURRENT FILING DATE: 2002-12-30
; NUMBER OF SEQ ID NOS: 319
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 48
; LENGTH: 3607
; TYPE: DNA
; ORGANISM: Artificial Sequence

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; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: p2PolTarRevNef.opt_C
US-10-190-435-48
Query Match      94.3%; Score 2322.6; DB 12; Length 3607;
Best Local Similarity 97.9%; Pred. No. 0;
Matches 2365; Conservative 0; Mismatches 44; Indels 6; Gaps 1;

Qy      1 GTGAGGCGCAACGATGGCGGAGGCGCATGAGCGAGGCGCAACCGCCCAATCTGATGACG 60
Db      1 GTGAGGCGCAACGATGGCGGAGGCGCATGAGCGAGGCGCAACCGCCCAATCTGATGACG 60
Qy      61 GCGAGCACTTCAAGGCGCCCAAGCGCATCATCAAGTCTTCAACTGCGCAAGAGAGGCG 120
Db      61 GCGAGCACTTCAAGGCGCCCAAGCGCATCATCAAGTCTTCAACTGCGCAAGAGAGGCG 120
Qy      121 CACATCGCCCGCAACTGCGCGGCCCGCGCAAGAGAGGCGCTGGAAGTGGCGCAAGAG 180
Db      121 CACATCGCCCGCAACTGCGCGGCCCGCGCAAGAGAGGCGCTGGAAGTGGCGCAAGAG 180
Qy      181 GGCACACGATGAAGGACCTGACCGGACGCGCAAGCTTCTTCCGCGAGGACCTGGCC 240
Db      181 GGCACACGATGAAGGACCTGACCGGACGCGCAAGCTTCTTCCGCGAGGACCTGGCC 240
Qy      241 TTCCCGCAAGGCGCAAGGCGCGAGTCCCGACGAGCAAGACCGCGCAACAGCCCAAC 300
Db      241 TTCCCGCAAGGCGCAAGGCGCGAGTCCCGACGAGCAAGACCGCGCAACAGCCCAAC 300
Qy      301 AGCCGCAAGCTGCAAGTGGCGGCGGAGCAACCCCGCAAGCGAGGCGCGCGCGCGAG 360
Db      301 AGCCGCAAGCTGCAAGTGGCGGCGGAGCAACCCCGCAAGCGAGGCGCGCGCGCGAG 360
Qy      361 GGCACCTGAACTTCCCCAGATCACTGTGGAGAGCGCCCTGTGAGAGATCAAGGTG 420
Db      361 GGCACCTGAACTTCCCCAGATCACTGTGGAGAGCGCCCTGTGAGAGATCAAGGTG 420
Qy      421 GCGGCGCAAGTCAAGAGGCGCTGTGAGACCGGCGCGCAACACGATGCTTGAGAGAG 480
Db      421 GCGGCGCAAGTCAAGAGGCGCTGTGAGACCGGCGCGCAACACGATGCTTGAGAGAG 480
Qy      481 ATGAGCTTGGCCCGCAAGTGGAGAGCCCAAGTATCGGCGGATCGGCGGCTTATCAAG 540
Db      481 ATGAGCTTGGCCCGCAAGTGGAGAGCCCAAGTATCGGCGGATCGGCGGCTTATCAAG 540
Qy      541 GTGGCGCAGTACGACCGATCTGATCGAATCTGCGGCAAGAGCGCATCGGCAAGCGTG 600
Db      541 GTGGCGCAGTACGACCGATCTGATCGAATCTGCGGCAAGAGCGCATCGGCAAGCGTG 600
Qy      601 CTGATGGCGCCCAACCCCGTGAACATCATGCGCGCAACATGCTGACCCAGCTGGCTGC 660
Db      601 CTGATGGCGCCCAACCCCGTGAACATCATGCGCGCAACATGCTGACCCAGCTGGCTGC 660
Qy      661 ACCCTGAACCTTCCCAACAGCCCATGAGAGAGCGTGGCGTGAAGCTGGAAGCCCGGATG 720
Db      661 ACCCTGAACCTTCCCAACAGCCCATGAGAGAGCGTGGCGTGAAGCTGGAAGCCCGGATG 720
Qy      721 GACGCGCCCAAGTGAAGCAGTGGCCCTGACGAGAGAGAGATCAAGGCGCTGACCGGC 780
Db      721 GACGCGCCCAAGTGAAGCAGTGGCCCTGACGAGAGAGAGATCAAGGCGCTGACCGGC 780
Qy      781 ATCTGCGAGAGATGAGAGAGAGGCGAGATCAACCAAGTGGCGCCCGAGAACCCCTTAC 840
Db      781 ATCTGCGAGAGATGAGAGAGAGGCGAGATCAACCAAGTGGCGCCCGAGAACCCCTTAC 840
Qy      841 AACACCCCGGTGTCGACCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 900
Db      841 AACACCCCGGTGTCGACCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 900
Qy      901 TTCCGAGAGTGAACAGGCGCAACGAGATTTCTGGAAGGTGACGTGGCATGCCCGAC 960
Db      901 TTCCGAGAGTGAACAGGCGCAACGAGATTTCTGGAAGGTGACGTGGCATGCCCGAC 960
Qy      961 CCGCGCGGCTTAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 1020

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[illegible]

Db	2035	ACCAGCCGGGCGGCGAAGAATCGTGAGCCTGACCGAGACCAACAGAGACCGAG	2094
Qy	2101	CTGAGAGCCCATCAGCTGGCCCTGCAGGACAGGGGCGAGCGAGTGAACATCGTGACCGAC	2160
Db	2095	CTGAGAGCCCATCAGCTGGCCCTGCAGGACAGGGGCGAGCGAGTGAACATCGTGACCGAC	2154
Qy	2161	AGCCAGTACGCCCTCGGTCATCATCCAGGCGCCAGCCCGACAAGAGCGAGCGAGCTGGTG	2220
Db	2155	AGCCAGTACGCCCTCGGTCATCATCCAGGCGCCAGCCCGACAAGAGCGAGCGAGCTGGTG	2214
Qy	2221	AACAGATCATCGAGCAGCTGATCAAGAGGAGAAAGGTGTACCTGAGCTGGGTGCCCGCC	2280
Db	2215	AACAGATCATCGAGCAGCTGATCAAGAGGAGAAAGGTGTACCTGAGCTGGGTGCCCGCC	2274
Qy	2281	CACAGGGCATCGGCGGCGACGAGCAGATCGACAAGCTGTGACGAGGGCATCCGCAAG	2340
Db	2275	CACAGGGCATCGGCGGCGACGAGCAGATCGACAAGCTGTGACGAGGGCATCCGCAAG	2334
Qy	2341	GTGCTGTTCCTGGAGGSCATCGATGGCGGCATCGTGATCTACCACTACATGGAGCGACTG	2400
Db	2335	GTGCTGGAATTCAGAGCCCGTGGACCCCACTGGAGCCCTGGAAACCACCCCGGGAGCCAG	2394
Qy	2401	TACGTGGCGAGCGGC 2415	
Db	2395	CCCAAGACCGCGGC 2409	

RESULT 13  
US-10-190-435-47  
; Sequence 47, Application US/10190435  
; Publication No US20030143248A1  
; GENERAL INFORMATION:  
; APPLICANT: ZUR MEDEDE, Jan  
; APPLICANT: BARNETT, Susan W.  
; APPLICANT: LIAN, Ying  
; APPLICANT: ENGELBRECHT, Susan  
; APPLICANT: VAN RENSBURG, Estrelia J.  
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C  
; TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF  
; FILE REFERENCE: PP18133.003 / 2302-18133  
; CURRENT APPLICATION NUMBER: US/10/190,435  
; CURRENT FILING DATE: 2002-12-30  
; NUMBER OF SEQ ID NOS: 319  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 47  
; LENGTH: 3624  
; TYPE: DNA  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: Description of Artificial Sequence:  
; OTHER INFORMATION: p2PolTatRevNef.opt.native\_C  
US-10-190-435-47

Query Match	94.3%;	Score 2322.6;	DB 12;	Length 3624;
Best Local Similarity	97.9%;	Pred. No. 0;		
Matches 2385;	Conservative 0;	Mismatches 44;	Indels 6;	Gaps 1;
Qy 7	GCACCATGGCGAGGCCATGAGCCAGGCCACAGCGCCAAATCTGTATGACGCCACGC	66		
Db 1	GCACCATGGCGAGGCCATGAGCCAGGCCACAGCGCCAAATCTGTATGACGCCACGC	60		
Qy 67	AAC TTC AAGGGGCCCCAAGCGCATCATCAAGTGTCTTCAACTGGGCAAGGAGGCCACATC	126		
Db 61	AAC TTC AAGGGGCCCCAAGCGCATCATCAAGTGTCTTCAACTGGGCAAGGAGGCCACATC	120		
Qy 127	GCCCGCAACTGCGCGGCCCCCCCGCAAGAGGGCTCTGTGAATGTCGGCAAGGAGGCCAC	186		
Db 121	GCCCGCAACTGCGCGGCCCCCCCGCAAGAGGGCTCTGTGAATGTCGGCAAGGAGGCCAC	180		
Qy 187	CAGATGAAGGATGTCACCGAGCGCGCAGGCCAACTTCTTCGCGAGAACTGTCCTTCGCC	246		
Db 181	CAGATGAAGGATGTCACCGAGCGCGCAGGCCAACTTCTTCGCGAGAACTGTCCTTCGCC	240		

QY 247 CAGGGCAAGGCCCGGAGTTCCCGACGAGCAAGAACCGCGCCACACAGCCCGACAGCCGC 306  
 Db 241 CAGGGCAAGGCCCGGAGTTCCCGACGAGCAAGAACCGCGCCACACAGCCCGACAGCCGC 300  
 QY 307 GAGCTGCAAGTGCCTGCGGAGCAACCCCGCAGCGAGGCTGGGCGCCAGCGCAGCC 366  
 Db 301 GAGCTGCAAGTGCCTGCGGAGCAACCCCGCAGCGAGGCTGGGCGCCAGCGCAGCC 360  
 QY 367 CTGAACCTTCCCGACATCACTCTGAGAGCGCGCCCTGTGTAGAGCATGAAGGTGGGCGGC 426  
 Db 361 CTGAACCTTCCCGACATCACTCTGAGAGCGCGCCCTGTGTAGAGCATGAAGGTGGGCGGC 420  
 QY 427 CAGATCAAGAGGCCCTGCTGAGCAACCGCGCCGACGACACCTGTCTGAGAGAGTAGAC 486  
 Db 421 CAGATCAAGAGGCCCTGCTGAGCAACCGCGCCGACGACACCTGTCTGAGAGAGTAGAC 480  
 QY 487 CTGCCCCGCAAGTGAAGGCCCAAGTAGATCGCGGCAATCGCGGCTTATCAAGGTGCGC 546  
 Db 481 CTGCCCCGCAAGTGAAGGCCCAAGTAGATCGCGGCAATCGCGGCTTATCAAGGTGCGC 540  
 QY 547 CAGTACGACAGATCTGTATCGAGATCTGCGGCAAGAGGCGCATCGGACCGGTGCTATC 606  
 Db 541 CAGTACGACAGATCTGTATCGAGATCTGCGGCAAGAGGCGCATCGGACCGGTGCTATC 600  
 QY 607 GGGCCCAACCCCGTGAACATCATCGGCGGCAACATGTCTGACCCAGCTGGGCTGCAACCTG 666  
 Db 601 GGGCCCAACCCCGTGAACATCATCGGCGGCAACATGTCTGACCCAGCTGGGCTGCAACCTG 660  
 QY 667 AACTTCCCATCAGCCCATGAGACCGGTGCGCGGTGAGTGTGAAGCCCGGATGAGACGCGC 726  
 Db 661 AACTTCCCATCAGCCCATGAGACCGGTGCGCGGTGAGTGTGAAGCCCGGATGAGACGCGC 720  
 QY 727 CCCAAGGTGAAGAGTGGCCCTGACCGAGGAAAGATCAAGGCCCTGACCGCATCTGC 786  
 Db 721 CCCAAGGTGAAGAGTGGCCCTGACCGAGGAAAGATCAAGGCCCTGACCGCATCTGC 780  
 QY 787 GAGGAGTGAAGAGAGAGGCGCAAGATCAACAGTGGCCCGGAGAACCTCTTACAACCC 846  
 Db 781 GAGGAGTGAAGAGAGAGGCGCAAGATCAACAGTGGCCCGGAGAACCTCTTACAACCC 840  
 QY 847 CCCGTTCCGCTCAAGAGAGAGGACCGACCAAGTGGCCCGGATGAGTGTGACCTTCCG 906  
 Db 841 CCCGTTCCGCTCAAGAGAGAGGACCGACCAAGTGGCCCGGATGAGTGTGACCTTCCG 900  
 QY 907 GAGCTGAACAAGCGCACCGAGACTTCTGGAGGTGACGTGGGATCCCCACCGCGC 966  
 Db 901 GAGCTGAACAAGCGCACCGAGACTTCTGGAGGTGACGTGGGATCCCCACCGCGC 960  
 QY 967 GGGCTGAAGAGAGAGAGGCGTGAACCGTGTGGACGTGGGCGACGCTTACTTCAAGCTG 1026  
 Db 961 GGGCTGAAGAGAGAGAGGCGTGAACCGTGTGGACGTGGGCGACGCTTACTTCAAGCTG 1020  
 QY 1027 CCCCTGAGCGAGGACTTCCGAGAGTCAACCGCTTCAACATCCCGAGATCAACAGAG 1086  
 Db 1021 CCCCTGAGCGAGGACTTCCGAGAGTCAACCGCTTCAACATCCCGAGATCAACAGAG 1080  
 QY 1087 ACCCCCGGATCCGCTACCAAGTCAACGTGTGCCCCAGGGCTGGAAGGAGCGCCAGC 1146  
 Db 1081 ACCCCCGGATCCGCTACCAAGTCAACGTGTGCCCCAGGGCTGGAAGGAGCGCCAGC 1140  
 QY 1147 ATCTTTCAGAGAGCATGACCAAGTCTGTGAGGCCCTTCCGCGCCCGACACCCGAGATC 1206  
 Db 1141 ATCTTTCAGAGAGCATGACCAAGTCTGTGAGGCCCTTCCGCGCCCGACACCCGAGATC 1200  
 QY 1207 GTGATTCACCA-----GGCCCCCTGTACGTGGGCGAGGACCTGTGAGATGAGCGCAGAC 1260  
 Db 1201 GTGATTCACCAAGTACATGAGACCTGTGACGTGGGCGAGGACCTGTGAGATGAGCGCAGAC 1260  
 QY 1261 CGGCGCAAGATCGAGAGCTCGAGAGACCTGTGCGTGGGCTTTCACACACCCCGAGC 1320  
 Db 1261 CGGCGCAAGATCGAGAGCTCGAGAGACCTGTGCGTGGGCTTTCACACACCCCGAGC 1320  
 QY 1321 AAGAGACACGAGAGAGGCCCTTCTGTGATGGGCTACGAGCTGACACCCCGACAG 1380

Db 1321 AAGAGACACGAGAGAGGCCCTTCTGTGATGGGCTACGAGCTGACACCCCGACAG 1380  
 QY 1381 TGGACCTGTGACCCCATCGAGCTGCCGAGAGAGAGCTGTGACCTGTGAACATCATCAG 1440  
 Db 1381 TGGACCTGTGACCCCATCGAGCTGCCGAGAGAGAGCTGTGACCTGTGAACATCATCAG 1440  
 QY 1441 AAGCTGTGGGCAAGCTGAAGTGGGCGAGCAGATCAACCCGCGCATCAAGGTGGCGCAG 1500  
 Db 1441 AAGCTGTGGGCAAGCTGAAGTGGGCGAGCAGATCAACCCGCGCATCAAGGTGGCGCAG 1500  
 QY 1501 CTGTGCAAGCTGCTGCGCGGCGCCAGAGCCCTGACCGACATCTGTGCCCTGACCGAGAG 1560  
 Db 1501 CTGTGCAAGCTGCTGCGCGGCGCCAGAGCCCTGACCGACATCTGTGCCCTGACCGAGAG 1560  
 QY 1561 GCGGAGCTGAGAGCTGCGCGGAGAACCTGTGAAGTCTGTGCGGAGGCCGTGTGACGCGTGTAC 1620  
 Db 1561 GCGGAGCTGAGAGCTGCGCGGAGAACCTGTGAAGTCTGTGCGGAGGCCGTGTGACGCGTGTAC 1620  
 QY 1621 TACGACCCCGACAGAGCATGTGTGGCCGAGATCCAGAGGAGCGACGACAGTGGAC 1680  
 Db 1621 TACGACCCCGACAGAGCATGTGTGGCCGAGATCCAGAGGAGCGACGACAGTGGAC 1680  
 QY 1681 TACGAGTCTACCGAGAGCCCTTCAAGACCTTGAAGCCGCGCAAGTACGCCAAGATCGC 1740  
 Db 1681 TACGAGTCTACCGAGAGCCCTTCAAGACCTTGAAGCCGCGCAAGTACGCCAAGATCGC 1740  
 QY 1741 ACCGCGCGACCAAGCGAGTGAAGGAGCTGACCGAGGCGGTGAGAGAGATCGCCATGGAG 1800  
 Db 1741 ACCGCGCGCGACCAAGCGAGTGAAGGAGCTGACCGAGGCGGTGAGAGAGATCGCCATGGAG 1800  
 QY 1801 AGCATCTGTACTGTGGGCAAGACCCCAATTCGCTGCTGCTTCCAGAGAGAGACTGG 1860  
 Db 1801 AGCATCTGTACTGTGGGCAAGACCCCAATTCGCTGCTGCTTCCAGAGAGAGACTGG 1860  
 QY 1861 GAGACTGTGTGACCGACTTACTGTGCGAGGCCACTGTGATCCCGAGTGGAGTTGTGAC 1920  
 Db 1861 GAGACTGTGTGACCGACTTACTGTGCGAGGCCACTGTGATCCCGAGTGGAGTTGTGAC 1920  
 QY 1921 ACCCCCCCGTGGTGAAGCTGTGTGACCACTGGAGAGAGAGCCATCATCTGGGCGCAG 1980  
 Db 1921 ACCCCCCCGTGGTGAAGCTGTGTGACCACTGGAGAGAGAGCCATCATCTGGGCGCAG 1980  
 QY 1981 ACCTTTACGTGAGCGCGCGCGCCACCGCGAGACCAAGATCGGCAAGGCGGCTACGTG 2040  
 Db 1981 ACCTTTACGTGAGCGCGCGCGCCACCGCGAGACCAAGATCGGCAAGGCGGCTACGTG 2040  
 QY 2041 ACCGACCGGCGCGCGCGAGAGATGTGAGCTTGAACGAGACCAACAGAGACCGAG 2100  
 Db 2041 ACCGACCGGCGCGCGCGAGAGATGTGAGCTTGAACGAGACCAACAGAGACCGAG 2100  
 QY 2101 CTGAGGCGCATTCAGAGCTGGGCTGTGAGAGACGAGGCGAGGAGTGAACATCTGTGACCGAC 2160  
 Db 2101 CTGAGGCGCATTCAGAGCTGGGCTGTGAGAGACGAGGCGAGGAGTGAACATCTGTGACCGAC 2160  
 QY 2161 AGCCAGTACGCCCTGGGACATCATCAGGCCACCGGACAGAGCGAGCGAGCTGTG 2220  
 Db 2161 AGCCAGTACGCCCTGGGACATCATCAGGCCACCGGACAGAGCGAGCGAGCTGTG 2220  
 QY 2221 AACCAATCATTCAGAGCTGTGATCAAGAGAGAGTGTACTGTGAGCTGGGTGCGCC 2280  
 Db 2221 AACCAATCATTCAGAGCTGTGATCAAGAGAGAGTGTACTGTGAGCTGGGTGCGCC 2280  
 QY 2281 CACAAGGCGCATCGGCGCGCAAGAGATGAGCAAGTGTGTGAGCAAGGCGCATCCGAG 2340  
 Db 2281 CACAAGGCGCATCGGCGCGCAAGAGATGAGCAAGTGTGTGAGCAAGGCGCATCCGAG 2340  
 QY 2341 GTGCTGTTCTTGAACCGCATGATGGGCGCATGTGATCTACCAAGTACATGAGCACTG 2400  
 Db 2341 GTGCTGGAATTCAGAGCCGTGTGAGCCCGACACTGTGAGCCCTGTGAACACCCCGGAGCGAG 2400  
 QY 2401 TACGTGGGCGCGCGC 2415

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Db      2401 CCCAAGACCCGCTGC 2415

RESULT 14
US-10-190-435-46
; Sequence 46, Application US/10190435
; Publication No. US20030143248A1
; GENERAL INFORMATION:
; APPLICANT: ZUR MEGEDE, Jan
; APPLICANT: BARNETT, Susan W.
; APPLICANT: LIAN, Yidg
; APPLICANT: ENGELBRECHT, Susan
; APPLICANT: VAN RENSBERG, Esclrelita J.
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
; FILE REFERENCE: POLYPEPTIDES, POLYPEPTIDES AND USBS THEREOF
; FILE REFERENCE: PP18133.003 / 2302-18133
; CURRENT APPLICATION NUMBER: US/10/190,435
; CURRENT FILING DATE: 2002-12-30
; NUMBER OF SEQ ID NOS: 319
; SOFTWARE: PatentIn ver. 2.0
; SEQ ID NO 46
; LENGTH: 3597
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: p2PolIatRevNef opt C
US-10-190-435-46

Query Match      93.6%; Score 2304.4; DB 12; Length 3597;
Best Local Similarity 99.3%; Pred. No. 0;
Matches 2327; Conservative 0; Mismatches 11; Indels 6; Gaps 1;

QY      4 GAGCCACCATGCCGAGGCGCATGAGCCAGCCAGCCAGCCCAACATCTGTATGTCAGCGC 63
Db      1258 GACTGCGAATTCGCGAGGCGCATGAGCCAGCCAGCCAGCCAGCCCAACATCTGTATGTCAGCGC 1317

QY      64 AGCAATCTCAAGGCGCCCAAGCGCATCATCAAGTGTCTCAACTGCGGCAAGGAGGCGCAC 123
Db      1318 AGCAATCTCAAGGCGCCCAAGCGCATCATCAAGTGTCTCAACTGCGGCAAGGAGGCGCAC 1377

QY      124 ATCCGCGCAACTGCCGCGGCGCCCGCCAGAAAGGCTGCTGGAAGTGCGGCAAGGAGGGC 193
Db      1378 ATCCGCGCAACTGCCGCGGCGCCCGCCAGAAAGGCTGCTGGAAGTGCGGCAAGGAGGGC 1437

QY      184 CACCAAGATGAGGACTTCACCGAGCGCCAGCCAGCCAACTTTCTCCGCGAGGACCTGGGCTTC 243
Db      1438 CACCAAGATGAGGACTTCACCGAGCGCCAGCCAGCCAACTTTCTCCGCGAGGACCTGGGCTTC 1497

QY      244 CCCAGGCGAAGCGCGCGGATTCGCCAGGAGCAGAAACCGCGCCCAACAGCCCCACACAGC 303
Db      1498 CCCAGGCGAAGCGCGCGGATTCGCCAGGAGCAGAAACCGCGCCCAACAGCCCCACACAGC 1557

QY      304 CGCGAGCTGCAGTGCAGCGCGGACAAACCCCGAGAGGAGCGCGCGCGCGAGCGCGCGGCG 363
Db      1558 CGCGAGCTGCAGTGCAGCGCGGACAAACCCCGAGAGGAGCGCGCGCGCGAGCGCGCGGCG 1617

QY      364 ACCCTGAACTTCCCCAGATCACCTGTGSCAGCGCCCTCTGTGAGCATCAAGTGGGCG 423
Db      1618 ACCCTGAACTTCCCCAGATCACCTGTGSCAGCGCCCTCTGTGAGCATCAAGTGGGCG 1677

QY      424 GGCAGATCAAGAGGCGCTGTGGACACCGGCGCGAGACACCGTGTGGAGGAGATG 483
Db      1678 GGCAGATCAAGAGGCGCTGTGGACACCGGCGCGAGACACCGTGTGGAGGAGATG 1737

QY      484 AGCTCTCCCGGCAAGTGGAGCGCCCAAGATGATCGGCGGATCGGCGGCTTCATCAAGTGT 543
Db      1738 AGCTCTCCCGGCAAGTGGAGCGCCCAAGATGATCGGCGGATCGGCGGCTTCATCAAGTGT 1797

QY      544 CGCCAGTACGACAGATCTCTGATTCGAGATCTGGGCAAGAGGCGCATCGGCGGCTGTG 603
Db      1798 CGCCAGTACGACAGATCTCTGATTCGAGATCTGGGCAAGAGGCGCATCGGCGGCTGTG 1857

QY      604 ATCGGCGCCACCGCGCTGAACATCATTCGCGCGCAACATCTGACCCAGCTGGGCTGCACC 663

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Db      1858 ATCGGCGCCACCGCGTGAACATCATCGGCGCCAAATGCTGACCCAGCTGGGCTGCACC 1917
QY      664 CTGAATCTTCCCATCAGCCCCCATCGAGACCGTGCCTCGTGAAGCTGAAGCCCGCATGAC 723
Db      1918 CTGAATCTTCCCATCAGCCCCCATCGAGACCGTGCCTCGTGAAGCTGAAGCCCGCATGAC 1977
QY      724 GGCCCCAAGGTGAAGCAGTGGCCCTCAGCGAGGAGAGATCAAGGCCCTGACCGCCATC 783
Db      1978 GGCCCCAAGGTGAAGCAGTGGCCCTCAGCGAGGAGAGATCAAGGCCCTGACCGCCATC 2037
QY      784 TGCAGGAGATGAGAGAGGAGGCAAGATCACCAAGATCGGCCCGCGAGAACCCCTACAAC 843
Db      2038 TGCAGGAGATGAGAGAGGAGGCAAGATCACCAAGATCGGCCCGCGAGAACCCCTACAAC 2097
QY      844 ACCCCGCTGTTCGCCATCAAGAGAGAGGAGCAGCAACAGTGGCGCAAGCTGGTGGATTC 903
Db      2098 ACCCCGCTGTTCGCCATCAAGAGAGAGGAGCAGCAACAGTGGCGCAAGCTGGTGGATTC 2157
QY      904 CGCGAGCTGAACAAAGCGCACCCAGGACTTCTGGAGGTGAGCTGGGCGACGCTTACTT 963
Db      2158 CGCGAGCTGAACAAAGCGCACCCAGGACTTCTGGAGGTGAGCTGGGCGATCCCCACCC 2217
QY      964 GCGGCTCAAGAGAGAGAGAGGAGCGTGAACGCTGCTGGAACGCTGGGCGACGCTTACTT 1023
Db      2218 GCGGCTCAAGAGAGAGAGAGGAGCGTGAACGCTGCTGGAACGCTGGGCGACGCTTACTT 2277
QY      1024 GTGCCCCCTGGAGGAGACTTTCGCAAGTACACCGCTTTCACATCCCGAGCATCAACAAC 1083
Db      2278 GTGCCCCCTGGAGGAGACTTTCGCAAGTACACCGCTTTCACATCCCGAGCATCAACAAC 2337
QY      1084 GAGACCCCGGATCCGCTACCAAGTACAAAGTGTGCTGCCCGAGGCTGGAGGAGGAGCC 1143
Db      2338 GAGACCCCGGATCCGCTACCAAGTACAAAGTGTGCTGCCCGAGGCTGGAGGAGGAGCC 2397
QY      1144 AGATCTTCCAGAGCAGCATGACCAAGATCTCTGGAGCCCTTTCGCGCGCGCGCAACCCGAG 1203
Db      2398 AGCATCTTCCAGAGCAGCATGACCAAGATCTCTGGAGCCCTTTCGCGCGCGCGCAACCCGAG 2457
QY      1204 ATCTGTATCTACAGGCGCCCTCTGTACGTTGGGAGGAGCTGGAGATCGGCGAGACCG 1263
Db      2458 ATCTGTATCTACAGGCGCCCTCTGTACGTTGGGAGGAGCTGGAGATCGGCGAGACCG 2517
QY      1264 GCCAAGATCAGAGCTGCGCAAGCAGCTGTGCTGGGCTTTCGCGCGCGCGCAACCCGAG 1323
Db      2518 GCCAAGATCAGAGCTGCGCAAGCAGCTGTGCTGGGCTTTCGCGCGCGCGCAACCCGAG 2577
QY      1324 AAGCACCAGAGAGAGCCCTTCTGTGGATGGGCTACGAGCTGCACCCCGCAACAAAGTGG 1383
Db      2578 AAGCACCAGAGAGAGCCCTTCTGTGGATGGGCTACGAGCTGCACCCCGCAACAAAGTGG 2631
QY      1384 ACCTGTGAGCCCATCGAGTGCAGAGAGAGAGTGGAGCTGAGACCGTGAACGACATCCAGAAG 1443
Db      2632 ACCTGTGAGCCCATCGAGTGCAGAGAGAGAGTGGAGCTGAGACCGTGAACGACATCCAGAAG 2691
QY      1444 CTGTGGGCAAGCTGAATGGGCCAGCAGATCTACCCCGGATCAAGTGGCGGAGCTG 1503
Db      2692 CTGTGGGCAAGCTGAATGGGCCAGCAGATCTACCCCGGATCAAGTGGCGGAGCTG 2751
QY      1504 TGCAGCTGCTGCGCGGCGCAAGGCCCTTGCACCGATCTGTCCTTGCACCCGAGAGGCG 1563
Db      2752 TGCAGCTGCTGCGCGGCGCAAGGCCCTTGCACCGATCTGTCCTTGCACCCGAGAGGCG 2811
QY      1564 GAGCTGAGCTGGCGCGAGAAACCGCGAGATCTCTGCGGAGCCCGTGCACGCGCTGTACTAC 1623
Db      2812 GAGCTGAGCTGGCGCGAGAAACCGCGAGATCTCTGCGGAGCCCGTGCACGCGCTGTACTAC 2871
QY      1624 GACCCAGCAGGAGCTGTGGCGGAGATCCAGAGGAGGCGCAGACAGTGGAGCTTAC 1683
Db      2872 GACCCAGCAGGAGCTGTGTGGCGGAGATCCAGAGGAGGCGCAGACAGTGGAGCTTAC 2931
QY      1684 CAGATCTACAGGAGCCCTTCAAGAACTGGAAGACCGGCAAGTACGCGCAAGATGCGCAC 1743

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	Matches	2286:	Conservative	0:	Mismatches	165:	Indels	15:	Gaps	3:				
QY	7	GCACCATG	GC	CCGACATG	AGCC	CCAGCC	AC	CCAGC	---	GC	CAACATCTGATG	CAGCGC	63	
Db	1	GCACCATG	GC	CCGACATG	AGCC	CCAGCC	AC	CCAGC	---	GC	CAACATCTGATG	CAGCGC	60	
QY	64	AGCAACTT	CA	AGGGCC	CCCA	AGCGAT	CA	TCAATG	CTT	CAATCTG	CGCTA	AGAGGGCC	AC	123
Db	61	GGCACTTC	CC	CCCAAC	CCAG	CGGAAG	AC	CGTCAAG	CTT	CAACTCG	CGCA	AGAGGGCC	AC	120
QY	124	ATCGCCGCA	ACTC	CCGCGCC	CCCC	CGCAGA	AGGGCT	CTG	GAAGT	GTGG	CGAAG	AGGGC	183	
Db	121	ACCGCAGGA	ACTG	CCGCGCC	CCCC	CGCAGA	AGGGCT	CTG	TGGCG	CTG	CGCG	CGCAGA	180	
QY	184	CACCAATGA	AG	AGTCTG	CA	CCAGCG	CC	AGGCCA	ACTT	CTTCC	CGCAG	AGACTG	243	
Db	181	CACCAATGA	AA	AGATTG	CA	TGAAG	AG	CAGCTA	ATTCTT	CTCC	CGAG	AGACTG	240	
QY	244	CCCCAGG	GC	ACG	CCG	AGTTC	CCCA	CGCAG	CAAC	CGCG	CAAC	AGGCCA	CCAGC	303
Db	241	CTGACAGG	GC	ACG	CCG	AGTTC	CCCA	CGCAG	CAAC	CGCG	CAAC	AGGCCA	CCAGC	300
QY	304	CGCGAGCT	GC	AGTTC	CGCG	CGCG	---	ACA	CCCC	CGCAG	CGCG	CGCG	357	
Db	301	CGCGAGCT	GC	AGTTC	CGCG	CGCG	CAAC	CAAC	CGCG	CGCG	CGCG	CGCG	360	
QY	358	CAGGGCAC	CC	CTG	---	AACTT	CCCC	CAAT	CA	CCCTG	TGG	CGCG	411	
Db	361	CAGGGCAC	CC	CTG	---	AACTT	CCCC	CAAT	CA	CCCTG	TGG	CGCG	420	
QY	412	ATCAAGT	GG	CGCG	CC	AGATCA	AGAG	CGCT	CT	GTGA	CA	CCGCG	CGCG	471
Db	421	ATCAGAT	TC	CGCG	CC	AGATCA	AGAG	CGCT	CT	GTGA	CA	CCGCG	CGCG	480
QY	472	CTGAGAG	GA	TG	AGCT	CGCG	CGCG	AGT	TGA	AGCC	CAAG	TGAT	CGCG	531
Db	481	CTGAGAG	GA	TG	AGCT	CGCG	CGCG	AGT	TGA	AGCC	CAAG	TGAT	CGCG	540
QY	532	TTCAATCA	AG	GG	CGCG	CC	AGTCA	CGA	CAAC	CAAT	CT	GTGA	CGCG	591
Db	541	TTCAATCA	AG	GG	CGCG	CC	AGTCA	CGA	CAAC	CAAT	CT	GTGA	CGCG	600
QY	592	GGCAC	CG	TG	CT	GA	TC	CGCG	CC	CA	CT	GTGA	CGCG	651
Db	601	GGCAC	CG	TG	CT	GA	TC	CGCG	CC	CA	CT	GTGA	CGCG	660
QY	652	CTGAGCT	GC	AC	CTG	ATCT	CC	CAAT	CAG	CC	CA	CTG	AG	711
Db	661	ATGCGCT	GC	AC	CTG	ATCT	CC	CAAT	CAG	CC	CA	CTG	AG	720
QY	712	CCCGCAT	TGA	CGCG	CC	CAAG	GT	GA	AG	CA	GT	GC	CT	771
Db	721	CCCGCAT	TGA	CGCG	CC	CAAG	GT	GA	AG	CA	GT	GC	CT	780
QY	772	CTGACG	CC	CAAT	CTG	AGG	AG	AGT	GA	AG	AG	AG	AG	831
Db	781	CTGAGT	GA	TG	CA	CC	GA	TG	GA	AG	AG	AG	AG	840
QY	832	AA	CC	CT	CA	CA	CA	CC	CC	CG	CT	GA	AG	891
Db	841	AA	CC	CT	CA	CA	CA	CC	CC	CG	CT	GA	AG	900
QY	892	CTG	GT	GA	CTT	CG	CG	AG	CT	GA	AG	CT	GA	951
Db	901	CTG	GT	GA	CTT	CG	CG	AG	CT	GA	AG	CT	GA	960
QY	952	AT	CC	CC	CA	CC	CG	CG	CT	GA	AG	AG	AG	1011
Db	961	AT	CC	CC	CA	CC	CG	CG	CT	GA	AG	AG	AG	1020
QY	1012	GC	CT	ACTT	CA	GC	GT	GC	CT	GA	AG	AG	AG	1071
Db	1021	GC	CT	ACTT	CA	GC	GT	GC	CT	GA	AG	AG	AG	1080



QY 1072 AGCATCAACAAACGAGACCCCGCATCCGCTACAGTACAACTGCTGCCCCAGGCTGG 1131  
 Db 1081 AGCATCAACAAACGAGACCCCGCATCCGCTACAGTACAACTGCTGCCCCAGGCTGG 1140  
 QY 1132 AAGGGCAGCCCCAGCATCTTCCAGAGCAGCATGACCAAGATCCTGGAGCCCTTCCCGGCC 1191  
 Db 1141 AAGGGCAGCCCCAGCATCTTCCAGAGCAGCATGACCAAGATCCTGGAGCCCTTCCCGAAG 1200  
 QY 1192 CGCAACCCCGAGATCGTGATCTACAGGCCCCCTGTACGTGGCCAGCACTTGGAGATC 1251  
 Db 1201 CAGAACCCCGACATCGTGATCTACAGGCCCCCTGTACGTGGCCAGCACTTGGAGATC 1260  
 QY 1252 GGCAGCACCGCCCAAGATCGAGGAGCTGCGCAAGCACTGTGCTGGGCTTCAAC 1311  
 Db 1261 GGCAGCACCGCCCAAGATCGAGGAGCTGCGCAAGCACTGTGCTGGGCTTCAAC 1320  
 QY 1312 ACCCCCGACAAAGACACAGAAAGAGCCCCCTTCTGTGATGGGCTACGAGCTGCAC 1371  
 Db 1321 ACCCCCGACAAAGACACAGAAAGAGCCCCCTTCTGTGATGGGCTACGAGCTGCAC 1380  
 QY 1372 CCGGACAAGTGGACCTGTGAGCCATCGAGCTGCCCGAGAGAGAGCTGGACCGTGAAC 1431  
 Db 1381 CCGGACAAGTGGACCTGTGAGCCATCATGCTGCCCGAGAGAGAGCTGGACCGTGAAC 1440  
 QY 1432 GACATCCAGAAGCTGGTGGCAAGCTGAACCTGGGCCAGCCAGATCTACCCCGSCATCAAG 1491  
 Db 1441 GACATCCAGAAGCTGGTGGCAAGCTGAACCTGGGCCAGCCAGATCTACCCCGSCATCAAG 1500  
 QY 1492 GTGGCCAGCTGTGAAGTGTGTGCGCGGCCCAAGGCCCTGACCGACATCGTGCCTG 1551  
 Db 1501 GTGAAGCAGCTGTGAAGTGTGTGCGCGGCCCAAGGCCCTGACCGAGGTGATCCCTG 1560  
 QY 1552 ACCGAGAGCGCGAGCTGAGCTGGCCGAGAACCGCGAGATCTGCGGAGCCCGTGCAC 1611  
 Db 1561 ACCGAGAGCGCGAGCTGAGCTGGCCGAGAACCGCGAGATCTGGAAGAGCCCGTGCAC 1620  
 QY 1612 GCGCTGTACTAGACCCCAAGAGACCTGGTGGCCGAGATCCAGAGCAGGCGCCACGAC 1671  
 Db 1621 GAGGTGTACTAGACCCCAAGAGACCTGGTGGCCGAGATCCAGAGCAGGCGCCAGGCG 1680  
 QY 1672 CAGTGAACCTACAGATCTACAGGAGCCCTTCAAGAACCTGAAGACCGGCAAGTACGCC 1731  
 Db 1681 CAGTGAACCTACAGATCTACAGGAGCCCTTCAAGAACCTGAAGACCGGCAAGTACGCC 1740  
 QY 1732 AAGATCCGCAACGCCACACCAACGACGTGAAGCTGACCGAGCCCGTGCAGAGATC 1791  
 Db 1741 CGCATGCGCGGCGCCACACCAACGACGTGAAGCTGACCGAGCCCGTGCAGAGGTTG 1800  
 QY 1792 GCCATGGAGAGCATCGTGATCTGGGGCAAGACCCCAAGTTCGCTGCCATCCAGAG 1851  
 Db 1801 AGCACCGAGAGCATCGTGATCTGGGGCAAGATCCCAAGTTCAAGCTGCCATCCAGAG 1860  
 QY 1852 GAGACTGGGAGACTGTGGACCGACTACTGGCAGGCCACCTGGATCCCGAGTGGGAG 1911  
 Db 1861 GAGACTGGGAGACTGTGGATGGAGTACTGGCAGGCCCACTGGATCCCGAGTGGGAG 1920  
 QY 1912 TTCTGTGAACACCCCGCTGGTGAAGCTGTGGTACCACTGGAGAGAGGCCATCATC 1971  
 Db 1921 TTCTGTGAACACCCCGCTGGTGAAGCTGTGGTACCACTGGAGAGAGGCCATCATC 1980  
 QY 1972 GCGCGCGAGACCTTCTACGTGGAGCGCGCGCCCAACCGCGAGACCAAGATCGGCAAGGCC 2031  
 Db 1981 GCGCGCGAGACCTTCTACGTGGAGCGCGCGCCCAACCGCGAGACCAAGTGGGCAAGGCC 2040  
 QY 2032 GCGTACGTACCGACCGGGCGCGGAGAGATCGTGAGCTGACCGAGACCAACCAACAG 2091  
 Db 2041 GCGTACGTACCGACCGGGCGCGGAGAGAGTGGTGAAGTATCGCCGACACCAACCAACAG 2100  
 QY 2092 AAGACCGAGCTGAGGCCATCCAGCTGGCCCTGCGAGGACAGCGGCGAGCGGTGAACATC 2151  
 Db 2101 AAGACCGAGCTGAGGCCATCCAGCTGGCCCTGCGAGGACAGCGGCGCTGGAGGTGAACATC 2160

QY 2152 GTGACCGACAGCCAGTACGCCCTGGCATCATCCAGGCCAGCCCGACAGAGCCGAGAGC 2211  
 Db 2161 GTGACCGACAGCCAGTACGCCCTGGCATCATCCAGGCCAGCCCGACAGAGCCGAGAGC 2220  
 QY 2212 GAGCTGGTGAACCAAGATCATCGAGCAGCTGATCAAGAGGAGAGGTGTACCTGAGCTGG 2271  
 Db 2221 GAGCTGGTGAACCAAGATCATCGAGCAGCTGATCAAGAGGAGAGGTGTACCTGGCTGG 2280  
 QY 2272 GTGCCCCGCCCAACAGGGCATCGCGGCAACGAGCAGATCGACAAGCTGGTGAGCAAGGGC 2331  
 Db 2281 GTGCCCCGCCCAACAGGGCATCGCGGCAACGAGCAGGTGGACAAGCTGGTGAGCGCGGC 2340  
 QY 2332 ATCCGCAAGTGTCTGTTCCTGACCGCATCGATGCGGGCATCGTGTATCTACCAAGTACATG 2391  
 Db 2341 ATCCGCAAGTGTCTGTTCCTGAACCGCATCGATGCGGGCATCGTGTATCTACCAAGTACATG 2400  
 QY 2392 GACGACCTGTACGTGGCAGCGCGGCCCTAGGATCGATTAAAGCTTCCCGGGCTAGC 2451  
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Search completed: October 12, 2003, 17:33:30  
 Job time : 444.667 secs

GenCore version 5.1.6  
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OM nucleic - nucleic search, using sw model

Run on: October 12, 2003, 11:43:37 ; Search time 113.609 Seconds  
(without alignments)  
9592.294 Million cell updates/sec

Title: US-09-610-313-30  
Perfect score: 2469  
Sequence: 1 gtcgagccaccatggcgga.....gggctagcaccgtgaattc 2469

Scoring table: IDENTITY NUC  
Gapop 10.0 , Gapext 1.0

Searched: 569978 seqs, 220691566 residues

Total number of hits satisfying chosen parameters: 1139956

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : Issued Patents NA.\*  
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2: /cgn2\_6/prodata/2/ina/5B COMB.seq.\*  
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5: /cgn2\_6/prodata/2/ina/6C COMB.seq.\*  
6: /cgn2\_6/prodata/2/ina/backfiles1.seq.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	1678.6	68.0	4307	US-09-552-950-2	Sequence 2, Appli
2	1651.4	66.9	9772	US-09-552-950-5	Sequence 5, Appli
3	1227.2	49.7	9010	US-09-184-418C-8	Sequence 8, Appli
4	1196.2	48.4	8972	US-09-184-418C-9	Sequence 9, Appli
5	1189	48.2	8959	US-09-184-418C-11	Sequence 11, Appli
6	1165.6	47.2	8992	US-09-184-418C-4	Sequence 4, Appli
7	1132	45.8	2601	US-09-117-217-7	Sequence 7, Appli
8	1132	45.8	2601	US-09-117-217-9	Sequence 9, Appli
9	1132	45.8	2601	US-09-117-217-11	Sequence 11, Appli
10	1132	45.8	2601	US-09-117-217-13	Sequence 13, Appli
11	1132	45.8	2601	US-09-735-487-7	Sequence 7, Appli
12	1132	45.8	2601	US-09-735-487-9	Sequence 9, Appli
13	1132	45.8	2601	US-09-735-487-11	Sequence 11, Appli
14	1132	45.8	2601	US-09-735-487-13	Sequence 13, Appli
15	1132	45.8	4307	US-09-552-950-1	Sequence 1, Appli
16	1128.8	45.8	9719	US-09-700-304-1	Sequence 1, Appli
17	1125.6	45.6	7399	US-08-418-848A-9	Sequence 9, Appli
18	1125.6	45.6	7399	US-08-418-848A-5	Sequence 5, Appli
19	1125.6	45.6	7399	US-08-418-848A-1	Sequence 1, Appli
20	1125.6	45.6	7399	US-08-418-848A-3	Sequence 3, Appli
21	1125.6	45.6	7399	US-08-418-848A-7	Sequence 7, Appli
22	1125.6	45.6	7399	US-08-418-848A-11	Sequence 11, Appli
23	1125.6	45.6	12479	US-09-309-572-15	Sequence 15, Appli
24	1125.6	45.6	12494	US-09-318-138-13	Sequence 13, Appli
25	1125.6	45.6	12494	US-08-935-312-13	Sequence 13, Appli
26	1125.6	45.6	12494	US-08-848-760B-33	Sequence 33, Appli
27	1125.6	45.6	15581	US-08-646-538-35	Sequence 35, Appli
				US-09-503-222-35	Sequence 35, Appli

28	1122.8	45.5	3000	4	US-09-184-418C-74	Sequence 74, Appli
29	1121	45.4	8968	4	US-09-184-418C-1	Sequence 1, Appli
30	1116	45.2	9737	2	US-08-944-449-7	Sequence 7, Appli
31	1116	45.2	9737	4	US-09-353-362-7	Sequence 7, Appli
32	1108	44.9	8954	4	US-09-184-418C-6	Sequence 6, Appli
33	1101.2	44.6	3017	4	US-09-184-418C-83	Sequence 83, Appli
34	1099	44.5	3011	4	US-09-184-418C-101	Sequence 101, Appli
35	1088.6	44.1	8987	4	US-09-184-418C-2	Sequence 2, Appli
36	1085.6	44.0	8953	4	US-09-184-418C-3	Sequence 3, Appli
37	1085.2	44.0	9060	4	US-09-184-418C-10	Sequence 10, Appli
38	1080.8	43.8	9746	1	US-08-022-835-3	Sequence 3, Appli
39	1080.8	43.8	9746	1	US-08-388-809-3	Sequence 3, Appli
40	1080.8	43.8	9746	2	US-08-647-714-3	Sequence 3, Appli
41	1079.6	43.7	8932	3	US-09-124-900-1	Sequence 1, Appli
42	1079.6	43.7	8933	3	US-08-463-210-4	Sequence 4, Appli
43	1079.6	43.7	8933	3	US-09-620-958A-3	Sequence 3, Appli
44	1079.6	43.7	8933	3	US-09-620-958A-4	Sequence 4, Appli
45	1079.6	43.7	8933	3	US-09-620-958A-9	Sequence 9, Appli

ALIGNMENTS

RESULT 1  
US-09-552-950-2  
; Sequence 2, Application US/09552950  
; Patent No. 6541248  
; GENERAL INFORMATION:  
; APPLICANT: Oxford Biomedica (UK) Limited  
; TITLE OF INVENTION: Anti-Viral Vectors  
; FILE REFERENCE: 674524-2004  
; CURRENT APPLICATION NUMBER: US/09/552,950  
; CURRENT FILING DATE: 2000-04-20  
; NUMBER OF SEQ ID NOS: 22  
; SOFTWARE: PatentIn Ver. 2.1  
; SEQ ID NO 2  
; LENGTH: 4307  
; TYPE: DNA  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: Description of Artificial Sequence:gagpol-SVNGp - codon  
; OTHER INFORMATION: optimised gagpol sequence  
US-09-552-950-2

Query Match	68.0%;	Score	1678.6;	DB	4;	Length	4307;
Best Local Similarity	82.9%;	Pred. No.	4.6e-267;				
Matches	1368;	Conservative	0;	Mismatches	389;	Indels	16;
Gaps	4;						
QY	12	CATGCCCGAGGCCATGAGCCAGG	---CCACGAGCGCCCAACATCTCTGATGACGCGGAGAA	68			
Db	1086	CCTGGCTGAGGCGCATGAGCGAGTGACCACTCCGCTACCATCATGATGACGCGGCGAA	1145				
QY	69	CTTCAAGGGCCCCAAGCGCATCATCAAGTGTTCCTCACTGGCGCAAGGAGGGCCACATCG	128				
Db	1146	CTTTCGGAACCAACGCAAGATCGTCACTGTTCACTGTGCAAGAGGCGCACACAGC	1205				
QY	129	CCGCACTGCGCGCGCCCGCCCGCAAGAGGCTGTGGAAGTSCGCAAGAGGGCCACCA	188				
Db	1206	CCGCACTGCGAGGGCCCTAGGAAAGGGTGTGGAATGCGCAAGAGGAGGCCACCA	1265				
QY	189	GATGAAGACTGACCGAGCGCGGCGCAACTTCTTCGCGAGGACCTGGGCTTCCCGCA	248				
Db	1266	GATGAAGACTGTACGGAGAGACAGGCTAA-TTTTGTAGGAAGATCTGGGCTTCTCTACA	1324				
QY	249	GGGCAAGCGCGCGAGTTCCCGACGAGCAACCGCGCCCAACAGCCACCGCCGCGGA	308				
Db	1325	AGGAGGCGCAGGAATTTTTCAGAGCAACCGCGCCCAACAGCCACCGCCGCGGA	1384				
QY	309	GCTCAGGT-----GCGCGCGCAACCCCGCAGCGAGCGCGCGCGCGCAGGG	362				
Db	1385	GCTTCAGGTCTGGGGTCGCGACAACAACCTCCCTCCGAGCAGGAGCGCGCGCGCGG	1444				
QY	363	CA-----CCCTGACACTTCCCGGATACCTCTGGCAGCGCCCTCTGGTGAGCATCA	416				

Db 1445 CACGGTGTCTTCACTTCCCTCAGGTCAAGCTTTGGCAGCACCCTCGTCAACATCA 1504  
 Qy 417 GGTGGCCGGCCGATCAAGAGAGCCCTGTGTGACACCGCCCGACACACCTGTCTGA 476  
 Db 1505 GATCGGGGGGAGCTTCAAGAGAGCTTCTGTGACACCGGACGACACACCTGTCTGA 1564  
 Qy 477 GAGAGTGAAGCTTCCCGGCAAGTGAAGCCCAAGATGATCCGCGCATCGCGCTTCTAT 536  
 Db 1565 GAGATGTCTGTTCAGAGCCGTGAAGCCGAGATGATCCGCGCAATTCGGGGATTCGAT 1624  
 Qy 537 CAAGTGTGCGCATGACACAGATCTGTATGACATCTTGGCGGCAAGAGGCTGAC 596  
 Db 1625 CAAGTGTGCGCATGACACAGATCTGTATGACATCTTGGCGGCAAGAGGCTGAC 1684  
 Qy 597 CGTGTGATCGGCCCCCAACCCCGGATCATATCGGCGGCAACATGTGACCCGAGTGG 656  
 Db 1685 CGTGTGTGGGCCCCCAACCCCGTCAACATCATCGGAGCGCAACCTGTGACGACATGG 1744  
 Qy 657 CTGCACTCTGAATCTTCCCATCAAGCCCATGAGACCGTGGCCCTGTAAGTGAAGCCGG 716  
 Db 1745 TTGACCGCTGAATCTTCCCATTAAGCCCATGAGACCGGTAACGTTGAGCTGAAGCCGG 1804  
 Qy 717 CATGAGCGGCCCCCAAGGTGAAGCAAGTGGCCCTGACCGAGAGAAATCAAGCCCTGAC 776  
 Db 1805 GATGAGCGGCCCCCAAGGTGAAGCAAGTGGCCCATGACAGAGAGAAATCAAGGCACTGGT 1864  
 Qy 777 CGCATCTGAGAGAGATGAGAGAGAGAGGCGCAAGTCAACCAAGTCCGCCCCGAGAAC 836  
 Db 1865 GAGATTTGACACAGAGATGAGAGAGAGAGAGAAATCTCCAGATTTGGCCCTGAGAACCC 1924  
 Qy 837 CTACACACACCCCGTGTTCGCTATCAAGAGAGAGACACCAAGTGGCCGCAAGCTGT 896  
 Db 1925 GTACACACACCGCGGTGTTCGCTATCAAGAGAGAGACTCGACAAATGGCCGAGCTGT 1984  
 Qy 897 GAGCTTCCGAGAGCTGAACAAGCGCAACCCAGACTTCTGGGAGAGTGCAGCTGGGATCCC 956  
 Db 1985 GAGCTTCCGAGAGCTGAACAAGCGCAACCCAGACTTCTGGGAGAGTGCAGCTGGGATCCC 2044  
 Qy 957 CCACCCCGCGCGCTGAGAGAGAGAGAGAGAGAGTGCAGCTGGGAGAGTGGCGAGACGCTA 1016  
 Db 2045 GACACCCCGAGAGGCTGAGAGAGAGAGAGAAATCTGTCGCTATGATGTGGTATGCTTA 2104  
 Qy 1017 CTTCAGCGTGTCTCTGAGAGAGAGACTTCCGCAAGTACACCGCTTCAACATCCGAGAT 1076  
 Db 2105 CTTCGCTGTCTCTGAGAGAGAGACTTCCGCAAGTACACCGCTTCAACATCCGAGAT 2164  
 Qy 1077 CAACAGAGAGAGAGAGAGAGAGAGAGAGAGAGTGCAGCTGGGAGAGTGGCGAGAG 1136  
 Db 2165 CAACAGAGAGAGAGAGAGAGAGAGAGAGAGAGTGCAGCTGGGAGAGTGGCGAGAG 2224  
 Qy 1137 CAGCCCGAGATCTTCCAGAGAGAGAGAGAGAGAGTGCAGCTGGGAGAGTGGCGAGAG 1196  
 Db 2225 CTCTCCCGAGATCTTCCAGAGAGAGAGAGAGAGAGTGCAGCTGGGAGAGTGGCGAGAG 2284  
 Qy 1197 CCGCGAATCTGATCTACAGATGACAGATGACAGCTGTGAGTGGGAGAGAGAGAT 1256  
 Db 2285 CCGCGAATCTGATCTACAGATGACAGATGACAGCTGTGAGTGGGAGAGAGAGAT 2344  
 Qy 1257 CGGCGAGAGAGAGAGAGAGAGAGAGAGAGAGAGTGCAGCTGGGAGAGTGGCGAGAG 1316  
 Db 2345 AGGCGAGAGAGAGAGAGAGAGAGAGAGAGAGAGTGCAGCTGGGAGAGTGGCGAGAG 2404  
 Qy 1317 CACCCCGAGAGAGAGAGAGAGAGAGAGAGAGAGAGTGCAGCTGGGAGAGTGGCGAGAG 1376  
 Db 2405 CACACCCGAGAGAGAGAGAGAGAGAGAGAGAGAGAGTGCAGCTGGGAGAGTGGCGAGAG 2464  
 Qy 1377 CCGCGAAGAGAGAGAGAGAGAGAGAGAGAGAGAGTGCAGCTGGGAGAGTGGCGAGAG 1436  
 Db 2465 CCGCGAAGAGAGAGAGAGAGAGAGAGAGAGAGAGTGCAGCTGGGAGAGTGGCGAGAG 2524  
 Qy 1437 CGACATCGAGAGAGTGTGGGAGAGAGAGTGGGAGAGTGGGAGAGTGGGAGAGTGGGAGAG 1496

Db 2525 CGACATACAGAGAGTGTGGGAGAGTGAAGTGGGCGACATGATTTTCCAGGAGTTAA 2584  
 Qy 1497 GGTGGCCGAGTGTGCAAGTGTCTGCGCGCGCCAGAGCCCTGACCAATCGTCCCT 1556  
 Db 2585 GGTGAGGAGAGTGTGCAAGTGTCTGCGCGCGCCAGAGCCCTGACCAATCGTCCCT 2644  
 Qy 1557 GACCGAGAGAGAGTGTGCAAGTGTCTGCGCGCGCCAGAGCCCTGACCAATCGTCCCT 1616  
 Db 2645 AACCGAGAGAGAGTGTGCAAGTGTCTGCGCGCGCCAGAGCCCTGACCAATCGTCCCT 2704  
 Qy 1617 CGGCGTGTACTACAGAGAGAGAGAGAGAGAGTGTGCGCGAGATCCAGAGAGAGAGAG 1676  
 Db 2705 CGGCGTGTACTACAGAGAGAGAGAGAGAGAGTGTGCGCGAGATCCAGAGAGAGAGAG 2764  
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 Db 2765 CCAATGAGAGTGTGCAAGTGTCTGCGCGCGCCAGAGCCCTGACCAATCGTCCCT 2824  
 Qy 1737 CAAAGTGTGAGAGAGAGAGAGAGAGAGAGAGAGAGTGTGCGCGAGATCCAGAGAGAGAGAG 1796  
 Db 2825 CCGGATGAGAGAGAGAGAGAGAGAGAGAGAGAGAGTGTGCGCGAGATCCAGAGAGAGAGAG 2884  
 Qy 1797 CGCCAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGTGTGCGCGAGATCCAGAGAGAGAGAG 1856  
 Db 2885 CACCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGTGTGCGCGAGATCCAGAGAGAGAGAG 2944  
 Qy 1857 GAGAGCTGTGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGTGTGCGCGAGAGAGAGAGAG 1916  
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 Db 3005 GTTGTGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGTGTGCGCGAGAGAGAGAGAGAG 3064  
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 Qy 2037 CGGCGCGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGTGTGCGCGAGAGAGAGAGAG 2096  
 Db 3125 CGGCGCGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGTGTGCGCGAGAGAGAGAGAG 3184  
 Qy 2097 GAGTGTGCGCGAGAGAGAGAGAG 2156  
 Db 3185 GAGTGTGCGCGAGAGAGAGAGAG 3244  
 Qy 2157 CGGCGCGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGTGTGCGCGAGAGAGAGAGAG 2216  
 Db 3245 CGGCGCGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGTGTGCGCGAGAGAGAGAGAG 3304  
 Qy 2217 GAGTGTGCGCGAGAGAGAGAGAG 2276  
 Db 3305 GAGTGTGCGCGAGAGAGAGAGAG 3364  
 Qy 2277 GAGTGTGCGCGAGAGAGAGAGAG 2336  
 Db 3365 GAGTGTGCGCGAGAGAGAGAGAG 3424  
 Qy 2337 CAGCGAGTGTGCGCGAGAGAGAGAGAG 2396  
 Db 3425 CAGCGAGTGTGCGCGAGAGAGAGAGAG 3457

RESULT 2  
 US-09-552-950-5  
 Sequence 5, Application US/09552950  
 Patent No. 6541248  
 GENERAL INFORMATION:  
 APPLICANT: Oxford Biomedica (UK) Limited  
 TITLE OF INVENTION: Anti-Viral Vectors  
 FILE REFERENCE: 674524-2004  
 CURRENT APPLICATION NUMBER: US/09/552, 950  
 CURRENT FILING DATE: 2000-04-20

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; NUMBER OF SEQ ID NOS: 22
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 5
; LENGTH: 9772
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence:PSYNGP
US-09-552-950-5

Query Match      66.9%; Score 1651.4; DB 4; Length 9772;
Best Local Similarity 82.2%; Pred. No. 1.4e-262;
Matches 1951; Conservative 0; Mismatches 406; Indels 16; Gaps 4;

QY 12 CATGGCGAGGCCATGAGCCAGG---CCACCAGCGCCAACTCTCTGATGAGGCGAGCAA 68
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QY 69 CTTCAAGGGCCCCAAGCGCATCATCAAGTGCTTCAACTGGCGCAAGGAGGGCCACATGCG 128
DB 2253 CTTTCGGAACCAACGCAAGATCGTCAAGTGCTTCAACTGTGGCAAGAGGGGCACACAG 2312
QY 129 CCGCAACTGCGCGCCCGCCCGCGAAGAGGCTCTGGAAGTGGCGCAAGAGGGGCCACCA 188
DB 2313 CCGCAACTGCGAGGCCCTTAGGAAAAAGGGCTCTTGGAATGTGAAAGGAAAGGACACCA 2372
QY 189 GATGAGGACTGCACCGAGCGCCAGGCCCACTTCTTCGCGAGGAGCTTGGCCCTTCCCCA 248
DB 2373 AATGAAAGATTGACTGAGAGACAGGCTAA-TTTTATTAGGGAAGATCTGGCCCTTCCCA 2431
QY 249 GGGCAAGGCCCGGAGTCTCCCGAGCGAGAGAACCGCGCCAAAGCCGCCACAGCGCGCA 308
DB 2432 AGGGAAGGCCAGGGAATTTCTTCAGAGCAGACCAAGCCACAGCCGCCACCAAGAGA 2491
QY 309 GGTGAGAGTGGCGG-----CGAACAACCCCGCAGCGAGCGCGCGCGAGCGCGAGGG 362
DB 2492 GCTTCAGGTTTGGGGAAGAGACAACAACCTCTCAGAAAGCAGGAGCGCGATAGACAAG 2551
QY 363 CA-----CCCTGAATCTCCCGCAGATCACTCTGTGGCAGCGCGCCCTGGTGAGATCAA 416
DB 2552 AACTGTATCTTTAGTCTTCCCTCAGATCACTCTTTGGCAGCGACCCCTCGTCACAATAA 2611
QY 417 GGTGGCGGCCAGATCAAGAGGCGCTCTGTGACACCGCGCGCGAGCACACCGTGTGGA 476
DB 2612 GATAGGGGGCAGCTCAAGAGGCTCTCTGTGACACCGAGCAGACACACCGTGTGGA 2671
QY 477 GGAGATGAGCTGCGCGGCAAGTGAAGCCCAAGATGATCGCGGCGATCGCGGCTTCAT 536
DB 2672 GGAGATGTCGTTGCCAGGCGCGTGGAAAGCGGAAGATGATCGGGGGAAATCGCGGCTTCAT 2731
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DB 2732 CAAGTGGCCAGTATGACAGATCTCTATGAAATCTCGGCGCAAGGGCTATCGGTAC 2791
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DB 2792 CGTGTGTTGGGGCCCGCACACCGCTCAACATCATCGGACGCAACCTCTTGACGAGATCG 2851
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DB 2852 TTGACGCTGAATCTCCCATTAGCCCTATCGAGACGGTACCGGTGAAGTGAAGCCCGG 2911
QY 717 CATGACGCGCCCAAGTGAAGTGGCCCTCTGACCGGAGGAGAGATCAAGGCCCTGAC 776
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QY 777 CGCCATCTCGAGGAGATGGAAGAGGCGCAAGATCAACAAGATCGGCCCGCGAGAACCC 836
DB 2972 GGAGATTGCAAGAGATGGAAGAGGAGGAAATCTCCAAGATTGGCCCTGAGAACCC 3031
QY 837 CTACACACCCCGTGTTCGCCATCAAGAGAGAGGACGACCAAGTGGCGCAAGCTGGT 896
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QY 897 GCACTTCCGCGAGCTGAACAAGCGCACCCAGACACTTCTGGAGGTGACAGTGGGATGCC 956
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QY 957 CCACCCCGCGCGCTGAAGAAGAGAGCTGACCGTGTGGAGCTGGGCGGACGCCCTA 1016
DB 3152 GCACCCCGCAGGGCTGAAGAAGAAATCCGTGACCGTACTGGATGTGGGTGATGCCCTA 3211
QY 1017 CTTAGCGTGGCCCTGGACGAGGACTTCCGCAAGTACACCGCTTCCACCATCCCCAGCAT 1076
DB 3212 CTTCTCCGTTCCCTGGACGAGACTTTCAGGAAGTACACTGCTTCAACAATCCCTTCGAT 3271
QY 1077 GACAAACGAGACCCCGGATCCGCTACAGTACAACTGCTGCCCCAGGCTGGAAGGG 1136
DB 3272 CAACAACGAGACACCGGGGATTCGATATACATACAACTGCTGCCCCAGGCTGGAAGG 3331
QY 1137 CAGCCCCAGCATCTTCCAGAGCAGATGACCAAGATCTTGGAGCGCTTCCGCGCCGCAA 1196
DB 3332 CTTCTCCGCAATCTTCCAGAGTAGCATGACCAAAATCTTGGAGCCTTCCGCAACAGAA 3391
QY 1197 CCCCAGAGTCTGTATCTACAGTACATGGAACACTGTACGTGGGACGACCTGGAGAT 1256
DB 3392 CCCCAGCATCTGTATCTACATGATGATGATGATGATGATGATGATGATGATGATGAT 3451
QY 1257 CGGCGAGCACCGCGCAAGATCGAGAGCTGCGCAAGCACTGCTGCGCTGGGGCTTCA 1316
DB 3452 AGGGCAGCACCGCACCAAGATCGAGAGCTGCGCAGCACCTGTTGAGGTGGGGACTGAC 3511
QY 1317 CACCCCCACAAAGAACACCAAGAGCGCCCTTCTTGTGTGATGGGTAGAGCTGCA 1376
DB 3512 CACACCCGACAGAGACCAAGAGAGGCTTCCCTTCTTGTGATGGGTAGAGCTGCA 3571
QY 1377 CCCCACAAAGTGAACCGTGCAGCCCATCGAGTGCOCGAGAGAGAGCTGGAACCGTGA 1436
DB 3572 CCTTCACAAATGGAACCGTGCAGCTTATCGTGTGCGCAGAGAAAGACAGTGGACTGCA 3631
QY 1437 CGACATCAGAGAGCTGTGGGCAAGCTGAACCTGGGCGCAGCAGATCTACCCCGGATCAA 1496
DB 3632 CGACATCAGAGAGCTGTGGGGAAGTGAACCTGGGCGCAGTCAATTTACCCAGGATTA 3691
QY 1497 GGTGCGCCAGCTGTGCAAGCTGCTCGCGCGCCCAAGGCCCTGACCGACATCGTGGCCCT 1556
DB 3692 GGTGAGGAGCTGTGCAAACTCTTCGCGGACCAAGGCACTCAGAGGTATCCCCCT 3751
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QY 1617 CGGCGTGTACTACGACCCCGCAGAGGACCTGTGTGGCGGAGATCCAGAGCAGGCGCA 1676
DB 3812 CGGCGTGTACTATGACCCCTTCAAGGACCTGTATCGCGGAGATCCAGAGCAGGCGCAAG 3871
QY 1677 CCAGTGGACCTACAGATCTTACAGAGCGCTTCAAGAACCTGAAAGACCGGCAAGTACG 1736
DB 3872 CCAGTGGACCTTACAGATTTACAGAGCGCTTCAAGAACCTGAAAGACCGGCAAGTACG 3931
QY 1737 CAAGTGGACCGGCGCACCAAGAGCTGGAAGCAGTGAACCGAGGCGGTGCAAGAT 1796
DB 3932 CGGATGAGGGGTGCGGCACACTAACAGCTCAAGCAGCTGACCCGAGGCGGTGCAAGAT 3991
QY 1797 CGCCATGAGAGGATCTGTGATCTGGGCAAGACCCCGAGTTCGCCCTGCCATCCAGAA 1856
DB 3992 CACCAACGAAAGCATCTGTGATCTGGGGAAGACTCTTAAGTTCAAGTGGCCATCCAGAA 4051
QY 1857 GGAGACCTGGGAGACCTGTGACCGACTACTGGCAGGCCACCTGGATCCCGAGTGGGA 1916
DB 4052 GGAAACCTGGGAACCTGTGTGACAGATATTGGCAGGCCACCTGGATCTCTGAGTGGGA 4111
QY 1917 GTTCGTGAACACCCCGCTGCTGTTGAGCTGTGTGATCCAGCTGGAGAGAGGAGCCATCAT 1976
DB 4112 GTTCGTGAACACCCCGCTGCTGTTGAGCTGTGTGATCCAGCTGGAGAGAGGAGCCATAGT 4171
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QY 1977 CGGCGCCGAGACCTTCTTACGTGAGCGCGCCGCAACCGGAGACCAAGATGGGCAAGGC 2036  
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 Db 4172 GGGCGCCGAAACCTTTCTTACGTGATGGGCGCGCTTAAACAGGACTAGCTGGGCAAAAGC 4231  
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 QY 2037 CGGCTACGTGACCGACCGGCGCGGAGAGATCGAGCTTGACCGAGCAACCAACCA 2096  
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 Db 4232 CGGATACGTGACCGACCGGCGGAGAGAGATCGAGCTTGACCGAGCAACCAACCA 4291  
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 QY 2097 GAAGACCGAGCTGACGAGCGCATCCAGCTGGCCCTGACAGACAGCGGAGCGAGGTGACAT 2156  
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 QY 2217 CGAGCTGGTGAACCGAGTATGAGAGCTGATTCAGAGAGAGAGAGTGTACTGAGCTG 2276  
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 Db 4412 CGAGCTGGTGAATCGAGTATGAGAGCTGATTCAGAGAGAGAGAGTGTACTGAGCTG 4471  
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 QY 2277 GGTGCGCGCCGCAAGGCGCATCGGCGCAACGAGATGACAAAGCTGTGAGCAAGG 2336  
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 Db 4472 GGTACCGCGCCCAAGGCGCATTTGGGCGCAATGAGGAGGTGCAAGAGCTGTCTCGGCTGG 4531  
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 QY 2337 CATCGCAAGGTGCTGTTCTCGGACGCGCATCGA 2369  
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 Db 4532 CATCGAAGAGTGTCTATTTCTCGATGCGCATCGA 4564  
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# RESULT 3

US-09-184-418C-8

; Sequence 8, Application US/09184418C

; Patent No. 6492110

; GENERAL INFORMATION:

; APPLICANT: Hahn, Beatrice

; APPLICANT: Gao, Feng

; APPLICANT: Shaw, George

; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN

; TITLE OF INVENTION: IMMUNODEFICIENCY VIRUS TYPE 1

; FILE REFERENCE: D6287

; CURRENT APPLICATION NUMBER: US/09/184,418C

; CURRENT FILING DATE: 1999-11-02

; NUMBER OF SEQ ID NOS: 112

; SEQ ID NO 8

; LENGTH: 9010

; TYPE: DNA

; ORGANISM: Human immunodeficiency virus type 1

; FEATURE:

; OTHER INFORMATION: isolate=96ZM651, 137, 1621:"gag", 1426..4425:"pol";

; OTHER INFORMATION: 4370..4948:"vif", 4888..5178:"vpr";

; OTHER INFORMATION: 5159..5373-7734..7824:"tat", 5298..5373-7734..7981:"rev";

; OTHER INFORMATION: 5387..5647:"vpr", 5565..8171:"env", 8173..8793:"nef"

US-09-184-418C-8

Query Match 49.7%; Score 1227.2; DB 4; Length 9010;

Best Local Similarity 70.3%; Pred. No. 4,7e-193;

Matches 1657; Conservative 0; Mismatches 698; Indels 1; Gaps 1;

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 QY 74 AGGCGCCCAAGCGCATCTCAAGTGTCTTCACTGCGGCAAGAGGCGCAACTCGCCGCA 133  
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 Db 1281 AAGGAAATTAAGATGAGTAAATGTTTAACTGTGTGAAGAGGCGCATAGCAATA 1340  
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 Db 1341 ATTGCAAGGCGCCCTTAGGAAAGGCTGTGGAATGTGGAAGAGGCAACCAATGA 1400  
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 QY 194 AGGACTGACGAGCGGCGCAACTTCTTCCGAGAGAGACTGGCTTCCCGAGGCA 253  
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 Db 1401 AAGACTGTACTGAGAGGCGAGCTAA-TTTTAAAGGAAATTTGGCTTCCCAAGGGA 1459  
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QY 254 AGGCGCGAGGTTCCCGAGAGCAAGCCGCGCAACGAGCCGCGAGCTGC 313  
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 Db 1520 AGGTTCAGAGAGCAACCCCGCTCCGAAGCAGAGGTGGAAGAAGAGGAGGCTTAAT 1579  
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 QY 374 TCCCCAATACCTTGTGGAGAGGCCCCCTGTGAGATCAAGGTGGGCGCGCATCA 433  
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 Db 1580 TCCCTCAATACCTTTTGGAGAGGACCCCTTGTCTCAATTAAGGTAGGGGCGCAATTA 1639  
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 QY 434 AGGAGCGCTGTGACACCGCGCGAGCAGCGGCTGAGAGATGAGCTGCGCG 493  
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 Db 1640 AGGAGGCTCTTGAACACGAGGAGAGGTGATACAGTTTGAAGAAATTAATTGCGAG 1699  
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 QY 494 GCAAGTGAAGCCCAAGATGATCGCGCATCGCGGCTTCAATAGAGTGGCGCGAGTACG 553  
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 Db 1700 GCAATGGAACCAAAATGATAGAGGAAATTTGAGGCTTATCGAAGTAAAGCAATATG 1759  
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 QY 554 ACCAGATCTGATGAGATCTGCGGCAAGAGGCGCATGSCACCTGTGATCGGCCCA 613  
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 Db 1760 ATCAATTCCTATGGAATTTGTGGAATAAGGCTTATAGTACAGTATTAGTGAAGCTTA 1819  
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 QY 614 CCCCCGTGACATCATCGGCGCAACATGCTGACCCAGCTGGCTGCAACCTGAACCTTC 673  
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 QY 674 CCATCAGCCCGCATGAGACCGTCCCGTGAAGCTGAAGCCGCGATGAGCGGCCCAAG 733  
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 Db 1880 CAATTAATCTTATGAAACTGTACAGTAAATTAATTAAGCCAGATGAGTGGCCCAAGG 1939  
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 QY 734 TGAAGCATGCGCCCGTGCAGAGGAGAAATCAAGGCGCTTACCGCCATCTGCGAGAGA 793  
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## RESULT 4

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US-09-184-418C-9
; Sequence 9, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 9
; LENGTH: 8972
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=96ZM751.3; 137.1632:98g; 1419.4435:pol;
; OTHER INFORMATION: 4380.4958:vif; 4898.5188:vpr; 5169.7814:tat;
; OTHER INFORMATION: 5308.7938:rev; 5407.5667:vpu; 5585.8128:env;
; OTHER INFORMATION: 8130.8753:nef
US-09-184-418C-9
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Query Match      48.4%; Score 1196.2; DB 4; Length 8972;
Best Local Similarity 70.0%; Pred. No. 5.6e-188;
Matches 1662; Conservative 0; Mismatches 693; Indels 20; Gaps 3;

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## RESULT 8

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US-09-117-217-9
; Sequence 9, Application US/09117217
; Patent No. 6221578
; GENERAL INFORMATION:
; APPLICANT: de BETHUNE, Marie-Pierre
; APPLICANT: HERTOGS, Kurt
; TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE
; TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY
; FILE REFERENCE: 1377-125P
; CURRENT APPLICATION NUMBER: US/09/117, 217
; NUMBER OF SEQ ID NOS: 15
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 9
; LENGTH: 2601
; TYPE: DNA
; ORGANISM: HIV-HXB2
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (334)..(489)
; OTHER INFORMATION: gag p6 (52 aa)
US-09-117-217-9

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Query Match      45.8%; Score 1132; DB 3; Length 2601;
Best Local Similarity 68.5%; Pired. No. 1,7e-177;
Matches 1626; Conservative 0; Mismatches 730; Indels 16; Gaps 4;

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RESULT 9

US-09-117-217-11



/ Sequence 11, Application US/09117217  
/ Patent No. 6221578  
/ GENERAL INFORMATION:  
/ APPLICANT: de BETHUNE, Marie-Pierre  
/ APPLICANT: HERTOGS, Ruit  
/ APPLICANT: PUMELS, Ruit  
/ TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE  
/ TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY  
/ FILE REFERENCE: 1377-125P  
/ CURRENT APPLICATION NUMBER: US/09/117,217  
/ NUMBER OF SEQ ID NOS: 15  
/ SOFTWARE: Patent In Ver. 2.0  
/ SEQ ID NO 11  
/ LENGTH: 2601  
/ TYPE: DNA  
/ ORGANISM: HIV-HXB2  
/ FEATURE:  
/ NAME/KEY: CDS  
/ LOCATION: (453)..(749)  
/ OTHER INFORMATION: Protease  
US-09-117-217-11

Query Match 45.8%; Score 1132; DB 3; Length 2601;  
Best Local Similarity 68.5%; Pred. No. 1.7e-177;  
Matches 1626; Conservative 0; Mismatches 730; Indels 16; Gaps 4;

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2416 TCAGGAAGTACTATTTTAGATGGATAGAT 2447

RESULT 10  
US-09-117-217-13  
; Sequence 13, Application US/09117217  
; Patent No. 6221578  
; GENERAL INFORMATION:  
; APPLICANT: de BETHUNE, Marie-Pierre  
; APPLICANT: HERTOGS, Kurt  
; APPLICANT: PAUWELS, Rudi  
; TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE  
; TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY  
; TITLE OF INVENTION: OF HUMAN HIV STRAINS  
; FILE REFERENCE: 1377-125P  
; CURRENT APPLICATION NUMBER: US/09/117,217  
; CURRENT FILING DATE: 1998-07-24  
; NUMBER OF SEQ ID NOS: 15  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 13  
; LENGTH: 2601  
; TYPE: DNA  
; ORGANISM: HIV-HXB2  
; FEATURE:  
; NAME/KEY: CDS  
; LOCATION: (750)..(2435)  
; OTHER INFORMATION: Reverse Transcriptase  
US-09-117-217-13

Query Match 45.8%; Score 1132; DB 3; Length 2601;  
Best Local Similarity 68.5%; Pred. No. 1.7e-177;  
Matches 1626; Conservative 0; Mismatches 730; Indels 16; Gaps 4;

QY 14 TGGCCGAGGCCATGACCGAGGCCACCA---GGCCAAACATCTCTGATGCGAGCGAGCAACT 70  
DB 77 TGGCTGAAGCATGAGCCAGTAAACAATTAGCTACCAATATATGATGCGAGAGGCAATT 136  
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QY      1499 TGCGCGAGCTGTGACAGCTGCTGCGCGGCGCAAGGCCCTGACCGACATCGCGCCCTGA 1558
Db      1576 TAAAGCAATTTATGTAACTCTTAAAGAACCAAGCACTAACAGAGTATATACCACTPA 1635
QY      1559 CCGAGAGAGCGAGCTGAGCTGAGCGCGAAGACCGGAGATCCTGCGGAGCCCTGACG 1618
Db      1636 CAGAAAGACAGAGCTAGACCTGGCAAAAACAGAGAGTCTTAAAGAACAGTACATG 1695
QY      1619 GCGTGTACTAGACCCCAAGAGACCTGTGTGGCCGAGATCCAGAGAGGCGCAAGC 1678
Db      1696 GAGTGTATTTAGACCCATCAAAAGACTTAATAGCAAAATACAGAGAGGCGCAAGGCC 1755
QY      1679 AGTGAACCTTACAGATCTACAGAGGCCCTTCAAAACCTGGAAGCCGCGAAGTCCGCA 1738
Db      1756 AATGACATATCAAAATTTATCAAGGCCATTTAAAACTGAAAACAGAAAATATGCA 1815
QY      1739 AGATGCGACCGCCCAACCAAGACGATGAAGCAAGCTGACCGAGGCGGTGAGAAATCG 1798
Db      1816 GAATGAGGGGTGCCACACTAATGATGTAACAATTAACAGAGCAATGCAAAAAATA 1875
QY      1799 CCATGGAAGATCTGTATCTGGGCAAGACCCCAAGTTCCGCTGCTCCATCCAGAGG 1858
Db      1876 CCACGAAAGATAGTATATGSGGAAAGACTCTCTAAATTTAAACTGCCCATACAAAAG 1935
QY      1859 AGACCTGSGAGACCTGATGAGCCGACTA CTGGCAGGCACTGATTCGCCAGTGGAGT 1918
Db      1936 AAACATGSGAAACATGATGAGCAAGTATGSCAACCACTGATCTCTGATGGAGT 1995
QY      1919 TCGTGAACACCCCTCTGTGTGAAGCTGTGTACCAAGCTGAGAGAGGCCATCATCG 1978
Db      1996 TTGTTAATACCTCTCTCTTAAAGAAATATGATGATCACTTAAAGAAACCAATAGTAG 2055
QY      1979 GCGCGAGACCTTCTAAGCTGAGCGCGCCCAACCGGAGACCAAGTCCGCAAGGCG 2038
Db      2056 GAGCGAAGACCTTCTATGTATGAGGAGGCTAAACGAGGAGACTTAAATTAGAAAAGAG 2115
QY      2039 GCTACGTGACCGACCGGCGCGGAGAGATCGTGAAGCTGACCGAGACCAACCAAG 2098
Db      2116 GATATGTTACTTAATAGAGGAGAGCAAAAAGTTGTCACTTAACCTGACAAACAAATCA 2175
QY      2099 AGACCGAGCTGACAGGCATCAAGCTGCGCTTGCAGAGACAGCGGAGCGAGGTGAACAT 2158
Db      2176 AGACTGAGTTCAAGCAATTTATCTAGCTTGCAGAGATTGGGATTAAAGTAAACATAG 2235
QY      2159 TGACCGACAGCGCAAGTGAAGCCCTGGGCAATCATCCAGGCCCAACAGGCGAGAGCG 2218

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Db      2236 TAAAGACTCAATATGATCATTAAGAAATCTTCAAGCAACACAGATCAATGATCAG 2295
QY      2219 AGCTGTAAACCAATCATTCAGACGCTGATCAAGAGAGAGAGGTGTAAGCTGAGTGG 2278
Db      2296 AGTTAGTCAATCAATATATAGAGAGTAAATTAATAAGAAAGAAAGGTCTATCTGGCATGG 2355
QY      2279 TGCCGCGCCCAAGGGCATCGCGCGCAACGAGGAGATGACAAAGCTGTGTAGCAAGGCA 2338
Db      2356 TACAGGACACAAAGAAATTTGAGGAAATGAACAGTATGATTAATTAGTCAAGTCTGAA 2415
QY      2339 TCCGCAAGTGTCTGCTGAGCGCATCGAT 2370
Db      2416 TCAGGAAGTACTATTTTATGATGATAGAT 2447

RESULT 11
US-09-735-487-7
; Sequence 7, Application US/09735487
; Patent No. 6528251
; GENERAL INFORMATION:
; APPLICANT: de BETHUNE, Marie-Pierre
; APPLICANT: HERZOGS, Kurt
; APPLICANT: PAUMERS, Rudi
; TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE
; TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY
; TITLE OF INVENTION: OF HUMAN HIV STRAINS
; FILE REFERENCE: 1377-125P
; CURRENT APPLICATION NUMBER: US/09/735,487
; PRIOR FILING DATE: 2000-12-14
; PRIOR APPLICATION NUMBER: 09/117,217
; PRIOR FILING DATE: 1998-07-24
; NUMBER OF SEQ ID NOS: 15
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 7
; LENGTH: 2601
; TYPE: DNA
; ORGANISM: HIV-HXB2
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1)..(492)
; OTHER INFORMATION: gag Polyprotein
US-09-735-487-7

Query Match      45.8%; Score 1132; DB 4; Length 2601;
Best Local Similarity 68.5%; Pred. No. 1.7e-177;
Matches 1626; Conservative 0; Mismatches 730; Indels 16; Gaps 4;
QY      14 TGCCGAGGCCATGAGCCAGGCCACCA---GCGCCAATCTGTATGACGCGAGCAACT 70
Db      77 TGGCTGAAGCAATGAGCCAGTAAACAATTCAGCTACCATATATATGACAGAGGCAATT 136
QY      71 TCAGAGGCCCCCAAGCGCATCATCAAGTCTTCAACTGCGGCAAGAGAGGCCCATCGCCC 130
Db      137 TTAGGAACCAAGAAAGATTTTAAAGTTTCAATTTGTGCAAAAGAGGACACACACCA 196
QY      131 GCAACTCCGCGCCCGCCGCAAGAGAGGCTGTGGAAGTGGGCAAGAGAGGCCACACAGA 190
Db      197 GAATTCAGAGGCCCTTAGAAGAAAGGCTGTGGAATGTGAAAGAGAGAACCAAA 256
QY      191 TGAAGACTGACCGAGCGCGCAGGCCAACTTTCCGCGAGGACTTGCTTCCCGCAGG 250
Db      257 TGAAGATTTACTGAGAGACAGGCTPA--TTTTTAAAGGAAGATCTGGCTTCTTACAG 315
QY      251 GCAAGCGCGCGAGTTCCCGAGAGAGAACCGCGCAACACGCCCAACAGCCGCGAGC 310
Db      316 GAAGGCGCAAGGAAATTTTCTTCAAGAGACAGAGCCAAACGCCCAAGAGAGAGC 375
QY      311 TGCAAGTGTGCGCG-----GACAAACCCCGCAGCGAGCGCGCGCGAGCGCCAGGCA 364
Db      376 TTCAAGTCTGGGTTAGAGACAACTCTCCCTTCAGAGAGAGAGCGGATGACPAAGAA 435
QY      365 -----CCTGAACTTCCCGCAGATCACTCTGTGCGAGCGCCCTGTGTGAGCATCAAG 418

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436	Db	CTGTATCGCTTTAACTCTCCCTCAGGTCACTCTTTTGGCAACGACCCCTCGTCACAATAAAGA	495
419	QY	TGGCGGCGCAGATCAAGAGAGCCCTGTGTGGACACCGGCGCGACGACACCGTGTCTGAGG	478
496	Db	TAGGGGGCACTAAGGAAAGCTCTATTAGATACAGGACAGATGATACAGTATTAGAAG	555
479	QY	AGATGAGCTCTCCCGGCAAGTGGGAAGCCCAAGATGATCGGCGGCATCGGGGCTTCATCA	538
556	Db	AAATGAGTTTGCCAGGAAGATGGAAACCCAAAATGATAGGGGGAATTTGGAGTTTATCA	615
539	QY	AGGTGCCCACTAGCAGACCATCTGTATCGAGATCTGGGCAAGAGGCGCATCGGCAACG	598
616	Db	AAGTAAGACAGTATGATCAGATATCTATAGAAATCTGTGGAATAAAGCATATAGGTACAG	675
599	QY	TGCTGATCGGCCCAACCCCGTGAACATCATCGGCGCGCAACATGCTGACCCAGCTGGCT	658
676	Db	TATTAGTAGGACCTACACCTGTCAACATAATTGGAAGAAATCTGTTGACTCAGATTGGTT	735
659	QY	GCACCTTGAACTTCCCATCAGCCCCATCGAGACCGTGCCTGGAAGCTGAAGCCCGGCA	718
736	Db	GCATTTTAAATTTTCCCATTAGCCCTATTGAGACTGTACCACTGTAATTAAGCCAGGAA	795
719	QY	TGGAAGCCCAAGGTGAGCAGTGGGCCCTGACCGGAGGAGAAGATCAAGGCCCTGACCG	778
796	Db	TGGATGGCCCAAAAGTTAAACAAATGGGCCATTGACAGAAGAAAAATTAAGACATATTAGTAG	855
779	QY	CCATCTCGAGGAGATGGAGAAGAGGCGCAAGATCAACAAGTCGGCCCGCAGAAACCCCT	838
856	Db	AAATTTGTACAGAGATGGAAAGAGGAGAAATTTCAAAATTTGGGCTTGAAATCCAT	915
839	QY	ACAACACCCGCTGTTTCGCATCAAGAAGAGGACAGACCAAGTGGCGCAAGCTGGTGG	898
916	Db	ACAATACTCCAGTATTTGCCATAAGAAAAAGACAGTACTAAATGGAGAAAAATTAGTAG	975
899	QY	ACTTCCGCGAGCTGAAACAAGCGCACCGAGCTTCTGGGAGTGCAGCTGGGCATCCCC	958
976	Db	ATTTTCAGAGACTTAATAAGAGAACTCAAGACTTCTGGGAAGTTCAATTAGGAATACCA	1035
959	QY	ACCCGCGCGGCTCGAAGAAGAGAGCGTGACCGTCTGGAGTGGGCGACGCGCTACT	1018
1036	Db	ATCCGCGAGGCTTAAAAAGAGAAAAATCAGTAACAGTACTTGGATGGGTGATGCATATT	1095
1019	QY	TCAGGTGCCCCGTGGACGAGACTTCGCAAGTACACGCGCTTACCATCCCAGCATCA	1078
1096	Db	TTTCAGTTCCCTTAGATGAAGACTTCAGGAAGTATCTGCAATTACCATACCTAGTATAA	1155
1079	QY	ACAACGAGACCCCGGCATCCGTTACCAGTACACAGTGTCTGCCCCAGGCGTGGAGGCA	1138
1156	Db	ACAATGAGACACCAAGGATTAGATATCAGTACAATGTCTTCCACAGGATGGAAAGGAT	1215
1139	QY	GCCCCAGCATCTTCCAGCAGCAGTACCAAGATPCTTGGAGCCCTTCCGCGCCGCAACC	1198
1216	Db	CACCAGCAATATCCCAAGTAGCATGACAAAATCTTAGAGCTTTTAGAAAAACAATC	1275
1199	QY	CCGAGATCGTGATCTTACCACTACATGACACCTGTACGTGGGACGCACTGGAGATCG	1258
1276	Db	CAGACATAGTTATCTATCAATACATGGATGATTTGTTATGAGGATCTGCTTAGAATAG	1335
1259	QY	GCCAGACACCGCCAGATCGAGGAGTGGCAAGCAGCTGCTGCGCTGGGGCTTACCA	1318
1336	Db	GGCAGCATGAACAAAAATAGAGAGCTGAGACAACTCTGTTGAGGTGGGACTTACCA	1395
1319	QY	CCCCGCAAGAAGCACAGAAAGAGCCCCCTTCTCTGGATGGGCTACGAGCTGCACC	1378
1396	Db	CACCAGACAAAAACATCAGAAAGAACTCAATTCCTTTGGATGGGTTTAGAATCCATC	1455
1379	QY	CCGACAAGTGGACCGTGCAGCCCATCGAGCTGCCCGGAAGAGAGCTGGACCGTGAACG	1438
1456	Db	CTGATAAATGGACAGTACAGCTTATAGTGTGCCAGAAAAAGACAGCTGACTGCTCATG	1515
1439	QY	ACATTCAGAGCTGTGGGCAAGCTGAACTGGGCGACCGCAGATCTACCCGGCATCAAGG	1498
1516	Db	ACATACAGAAGTTAGTGGGAAATTTGAATTTGGCAGAGTCAAGTTATCCAGGATTAAG	1575

Qy	1499	TGCGCCAGCTGTGCAAGCTGCTGCGCGCGCCGAAGGCCCTGACCGACATCGTGCCTCTGA	1555
Db	1576	TAAAGCAATTATGTAAATCTCTTAGAGGAACCAAGACACTAAACAGAAGTAATACCACTAA	1635
Qy	1559	CCGAGGAGGCCGAGCTGGAGCTGGCGAGAACCGCGAGATCTCTGCGCGAGCCCGTGCACG	1618
Db	1636	CAGAAAGCAGAGCTAGAACTTGGCAGAAAACAGAGAGATCTTAAAGAACCAGTACATG	1695
Qy	1619	GCGTGTACTACGACCCGAGCAAGACCTGTGCGCGAGATCCGAAGACGAGGCCACGACC	1678
Db	1696	GAGTGTATTATGACCCATCAAAAGACTTAATAGCAGAAATACAGAAGCAGGGCGAAGGCC	1755
Qy	1679	AGTGGACCTACAGATCTACAGAGCGCTTCAAGACCTTCAAGACCGGCAAGTACGCCA	1738
Db	1756	AATGGACATATCAAAATTTATCAAGAGCCATTTAAAAATCTGAAACACGGAATAATGCA	1815
Qy	1739	AGATGCCACGCGCCCAACCAAGACGTGAAGCAGCTGACCGAGGCCGTGCAGAAGATCG	1798
Db	1816	GAATGAGGGTGGCCACACTAATGATGTAATAACAAATTAAACAGAGGCAGTGCAAAATAA	1875
Qy	1799	CCATGGAGAGCAGTGTGATCTGGGGGAGAGCCGCCAAGTTCCGCTGCCCATCCAGAAGG	1858
Db	1876	CCACAGAAACGATAGTAATATGGGGAAGACTCTTAATTTAAACTGCCCATCAAAAGG	1935
Qy	1859	AGACTGGGAGACTGTGTGACCCGACTACTTGGCAGGCCACTCGATCCCCGAGTGGGAGT	1918
Db	1936	AAACATGGGAACATGTTGACAGAGATTTGGCAAGCCACTGGATCTCTGAGTGGGAGT	1995
Qy	1919	TCGTGAACACGCCGCCCTGGTGAAGCTGTGTGACAGCTGGAGAGAGGCCCATCATCG	1978
Db	1996	TTGTGTAATACCCCTCCCTTAGTGAAATTTATGTGTACCAAGTTAGAGAAAGAACCCATAGTAG	2055
Qy	1979	GCGCCGAGACTTCTACGTGACGGCGCGCCCAACCGCAGACCAAGATCGGCAAGGCCG	2038
Db	2056	GACGAGAAACCTTCTATGTAGATGGGGCAGCTAACAGGGAGACTAAATTGGAAGAAAGCAG	2115
Qy	2039	GCTACGTGACCGACCGGGCGCGCAGAAGATCGTGAAGCTGACCTGACCGAGACACCAACGAGA	2098
Db	2116	GATATGTGTAATAATAGAGGAAGACAAAAGTTGTCACCCCTTAACGTACACAAACAAATCAGA	2175
Qy	2099	AGACCGAGCTGCAGGCCATCCAGCTGCCCTGCAGACACGCGCAGCGAGGTGAACATCG	2158
Db	2176	AGACTGAGTTACAGCAATTTATCTAGCTTTGCAGGATTCGGGATTAGAAGTAAACATAG	2235
Qy	2159	TGACCGACGCCAGTAGCGCCCTGGGCATCATCCAGGCCCGCCGACGAGAGCGAGAGCG	2218
Db	2236	TAAACAGACTCACAATATGCATTAGGAATCATTAAGCAACAACAGATCAAAGTGAATCAG	2295
Qy	2219	AGCTGTGAACAGATCATCGACAGCTGATCAAGAGGAGAGAGGTGTACCTGAGCTGGG	2278
Db	2296	AGTTAGTCAATCAAAATAATAGACGTGTAATAAAAAAGGAAGAGTCTATCTGTGGCATGGG	2355
Qy	2279	TGCCCGCCCAACAGGGCATCGCGCGGCAACGAGCAGATCGCAAGCTGGTGAGCAAGGCCA	2338
Db	2356	TACCAGCACACAGGAATTGGAGGAATATGACAACTAGATATAATTAGTCAGTCTGGAA	2415
Qy	2339	TCGCGAAGTGCTGTTCTCTGGACGGCATCGAT	2370
Db	2416	TCAGGAAAGTACTATTTTTTTAGATGGAAATAGAT	2447

RESULT 12  
US-09-735-487-9  
; Sequence 9, Application US/09735487  
; Patent No. 6528251  
; GENERAL INFORMATION:  
; APPLICANT: de BETHUNE, Marie-Pierre  
; APPLICANT: HERTOGS, Kurt  
; APPLICANT: PAUWELS, Rudi  
; TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE  
; TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY  
; TITLE OF INVENTION: OF HUMAN HIV STRAINS

FILE REFERENCE: 1377-125P  
 CURRENT APPLICATION NUMBER: US/09/735,487  
 CURRENT FILING DATE: 2000-12-14  
 PRIOR APPLICATION NUMBER: 09/117,217  
 PRIOR FILING DATE: 1998-07-24  
 NUMBER OF SEQ ID NOS: 15  
 SOFTWARE: Patent Ver. 2.0  
 SEQ ID NO 9  
 LENGTH: 2601  
 TYPE: DNA  
 ORGANISM: HIV-HXB2  
 FEATURE:  
 NAME/KEY: CDS  
 LOCATION: (334)..(489)  
 OTHER INFORMATION: gag P6 (52 AA)  
 US-09-735-487-9

Query Match 45.8%; Score 1132; DB 4; Length 2601;  
 Best Local Similarity 68.5%; Pred. No. 1.7e-177;  
 Matches 1626; Conservative 0; Mismatches 730; Indels 16; Gaps 4;

14 TGCCGAGGCGCATGAGCCAGGCCACCA---GCGCCACATCCTGATGAGCGGCGACACT 70  
 Db TGCGTAGAGCAATGAGCCAGTAAGTAATTCAGCTACATATGATGAGAGGCAATT 136  
 QY TCAAGGCGCCCAAGCGCATCATGATGCTTCACTGCGGCAAGAGGCGCCACATCGCC 130  
 Db TTAGAACCAAGAAAGATTGTTAAGTCTTCAATTGTGCAAGAAAGGCGCACACAGCCA 196  
 QY 131 GCAACTGCGCGCGCCCGCCGCAAGAGGCTGTGAAATGTGGGCAAGAGGCGCCACCA 190  
 Db 197 GAAATTGAGGCGCCCTTAGAAGAAAGGCGCTGTGAAATGTGAAAGAAAGAGACCAAA 256  
 QY 191 TGAAGACTGACCGAGCGCCAGGCACTTCTCCGAGAGAGCTGSCCTTCCCGCAG 250  
 Db 257 TGAAGATTGACTGAGAGACAGGCTA-TTTTTAGGAGAGATGTGSCCTTCTTCAAG 315  
 QY 251 GCAAGCGCGGAGTTCCCGAGCGAAGAACCGCGCAACAGCCCGCAACCGCGAGC 310  
 Db 316 GGAAGCGCAGGAAATTTTCTTCAGAGCAGACCAAGGCAACAGCCCGCACAGAGAGC 375  
 QY 311 TGCGAGTCCGCGG-----CGACAAACCCCGCAGAGAGCGCGCGCCGAGCGCCAGGCA 364  
 Db 376 TTCAGTCTGGGATGAGACAAACATCCCTCCAGAGCGAGGCCCATGAGACAGGAA 435  
 QY 365 -----CCCTGAACCTTCCCGCAGATCACCTGTGAGCAGCGCCCTGTGAGCATCAAG 418  
 Db 436 CTGATCTTAACTTCCCTCAGGTCATCTTTGGCAACGACCTCTGTCAATTAAGA 495  
 QY 419 TGCGCGGCGAGATCAAGGAGCGCTGTGACACCGCGCGCAGACGACCGTGTGAGG 478  
 Db 496 TAGGGGGGCACTAAGAGAACTCTATTAGATACAGAGCAGATGATACATATTAGAG 555  
 QY 479 AGATGAGCTGCGCGCGGAGAGTGGAAAGCCAGAGATGTGGGGGAGTGGCGCGCTTCA 538  
 Db 556 AAATGAGTTTGCAGGAAGATGAGAAACCAAAATGATATGAGGGAATTTGAGGTTTCA 615  
 QY 539 AGGTGCGCAGTACAGCAGATCTGATCGAGATCTGCGCAAGAGGCGCATCGGCAACG 598  
 Db 616 AAGTAAAGCAGTATGATAGATATCTCATAGAAATCTGTGACATTAACCTTATAGTACG 675  
 QY 599 TGTGATGCGCGCCACCGCCGTGAACATCATCGCGCGCAACATGTGACCCAGCTGGGCT 658  
 Db 676 TATTAGAGGACCTAACCTGTCAACATTAATTGGAAGAAATCTGTGACTAGATGTGTT 735  
 QY 659 GCACCTGAACTTCCCATCAGCCCGCATCGAGACCGTCCCGTGAAGTGAAGCCCGCA 718  
 Db 736 GCACTTTAAATTTTCCCTTAGCCCTATTGAGACTGTACAGTAAATTAAGCCAGAA 795  
 QY 719 TGAAGCGCGCCAGAGTGAAGCAGTGGCCCTGACCGAGAGAGATCAAGGCGCTGACCG 778  
 Db 796 TGAATGCGCCAAAGTTAAACATGCGCATTTGACAGAAAGAAATAAATTAAGCATTAAG 855

QY 779 CCATCTGCGAGAGATGAGAGAGGCGCAAGATCACCAAGATGCGCCCGAGAACCCCT 838  
 Db 856 AAATTTTACAGAGATGAGAAAGAGACGAAANTTTCAAAATTTGGGCTCGAAATCAT 915  
 QY 839 ACAACACCCCGCTGTGCGCATCAAGAGAGCAGACCAACAGTGGCGCAAGCTGTGG 898  
 Db 916 ACAATCTCCAGTATTTGCCATAAGAAAAAGCAGTACTTAATGAGAAATTAAGTAG 975  
 QY 899 ACTTCGCGAGCTGAGCAAGCGCACCCAGATCTTCGAGAGTGCAGCTGGCATCCCC 958  
 Db 976 ATTTCAGAGAACTTAATTAAGAGAACTCAAGACTTCTGAGAGTCAATTAGGAATACAC 1035  
 QY 959 ACCCGCGCGCTGAGAGAGAGAGAGCGTGAACCTGTGAGAGTGGCGCAACCCCTACT 1018  
 Db 1036 ATCCCGAGGCTTAAAAAAGAAAAATCAGTACAGTACTGAGTGTGGTATGATATTT 1095  
 QY 1019 TCAGCTGCGCTGAGAGAGACTTCGCAAGTACACCGCTTCAACATCCAGCATCA 1078  
 Db 1096 TTTCAAGTCCCTTAGATGAGAGACTTCAGAGAGTACTGATTTACATACCTAGTATTA 1155  
 QY 1079 ACAACGAGACCCCGGATCCGCTACAGTAAACGTGCGCCCGAGGCGTGAAGGCA 1138  
 Db 1156 ACAATGAGACACAGGATTTAGATATAGTACATTTGTCTTCAACAGGAGTGAAGAGAT 1215  
 QY 1139 GCGCCAGCATCTTCAGAGCAGATGACCAAGATCTGAGACCCCTTCGCGCCGCAAC 1198  
 Db 1216 CACGAGATATTCCAAGTAGAGTACGACAAATCTTAGAGCCCTTTAGAAAACAAAATC 1275  
 QY 1199 CCGAGATCTGATTTACAGTACATGAGCAGCTGTACGTGGGAGCGAGCCTGAGATCG 1258  
 Db 1276 CAGCATAGTATCTTAACAATACATGATATTTGTATGTAGATCTGACTAGAAATAG 1335  
 QY 1259 GCGCAGACCGCGCAAGATGAGAGTGTGGAAAGCAGCTGCGCGCTTCACCA 1318  
 Db 1336 GCGAGCATAAACAAATATGAGAGCTGAGACACTGTGTGAGTGGGACTTACCA 1395  
 QY 1319 CCCCAGCAAGAGCACAGAGAGCCCGCTCTCTGTGATGGCTACAGAGCTGAC 1378  
 Db 1396 CACGAGCAAAAAACATCAAGAAAGACCTCCATTCCTTTGATGGTTATGAACTCATC 1455  
 QY 1379 CCGAGATGAGACCGTCCAGCCATCGAGCTGCCGAGAAAGAGAGCTGACCTGAAAC 1438  
 Db 1456 CTGTAATGAGACAGTACACCTATAGTGTGCGCAAGAAAAAGCAGCTGACCTGCAATG 1515  
 QY 1439 ACATCCGAGAGCTGTGGGCGAGCTGAGCTGGGCGACCGAGTACCCCGGCAATCAAG 1498  
 Db 1516 ACATAGAGAGTATGATGGGAAATTGAATTTGGGCACTGATTTACCGAGGATTAAG 1575  
 QY 1499 TGCGCAGCTGTGCAAGCTGCTGCGCGCGCAAGGCCCTGACCGACATGTCGCCCTGA 1558  
 Db 1576 TAAAGCAATTATGTAACCTCTTAGAGGAACCAAGACATTAACAGATTAATACACTTA 1635  
 QY 1559 CCGAGAGGCGCGAGCTTGGAGCTGGCGAGAACCGCGAGATCTTCCGCGAGCCGTGACG 1618  
 Db 1636 CAGAGAGGCGAGGCTGAGACTGGCAGAAAAACAGAGAGATTCTAAAAAACCATGATG 1695  
 QY 1619 GCGTGTACTGAGACCCCGAGAGAGACCTGTGGCGGAGTCCGAAACAGGCGCAGAC 1678  
 Db 1696 GAGTGTATTGAGCCATCAAAAGACTTAATAGCAAAATACAGAACAGGCGCAAGGCC 1755  
 QY 1679 AGTGAAGCTTACAGATCTACAGAGACCTTCAAGAACTGAAGACCGGCAAGTACCCA 1738  
 Db 1756 AATGACATATCAAAATTTATCAAGAGCAATTTAAAAATGAAACAGAAAAATATGCAA 1815  
 QY 1739 AGATGCGCAACCGCGCAACCAAGAGAGTGAAGAGCTGACCGAGGCGGTGAGAGATCG 1798  
 Db 1816 GAATGAGGGTGCACACTTAATGATTAACAAATTAACAGAGCGCTCAAAAAATTA 1875  
 QY 1799 CCATGAGAGCATCTGATCTGGGCAAGACCCCGAAGTCCGCGCTGGCCATCAAGAAAG 1858  
 Db 1876 CACAGAGAGCATAGTAATTTGGGAAAGCTCTTAATTTAACTGCGCATTAACAAAGG 1935  
 QY 1859 AGACTTGGAGACCTGTGAGCCGACTAATGAGAGCCACTTGATCCCGAGTGGAGAT 1918

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Db 1936 AATCATGGGAAACATGGTGGACAGAGTATTGGCAAGCCACCTGGATTCTCTGAGTGGGAGT 1995
QY 1919 TCGTGAACACCCCCCTCGTGAAGCTGTGGTACCAGCTGGAGAAAGGAGGCCATCATCG 1978
Db 1996 TTGTTAATACCCCTCCCTTAGTGAATATTGTTACCACTAGTAGAAGAACCCATAGTAG 2055
QY 1979 GCGCCGAGACCTTCTAGCTGGACGCGCGGCCAACCGCGAGACCAAGATCGGCAAGCCCG 2038
Db 2056 GAGCAGAAACCTTCTATGTAGATGGGCGAGCTAACAGGGAGACTAAATTAGGAAAGCAG 2115
QY 2039 GCTACGTGACCGACCGGGCGGCGAGAGATCGTGAACCTGACCGAGACCAACCAACAGA 2098
Db 2116 GATATGTTACTAATAGAGGAAGACAAAGATGTGCACCCCTAATGACACACAAATCAGA 2175
QY 2099 AGACCGAGCTGCGAGGCCATCAGCTGGCCCTGCAGGACAGCGGCGAGGAGTGAACATCG 2158
Db 2176 AGACTGAGTTACAGCAATTAICTAGCTTTCAGGATTCGGGATTAGAGTAAACATAG 2235
QY 2159 TGACCGACACCCAGTACGCGCTCGGCATCATCCAGGCCCGCCGACCAAGAGCGAGAGCG 2218
Db 2236 TAACAGACTCACAAATATGCAATAGGAATCATTAAGCACCAACAGATCAAAAGTGAATCAG 2295
QY 2219 AGCTGTGACCAATCATCAGCAGCTGATCAAGAGGAGAGGTGTACTGAGCTGGG 2278
Db 2296 AGTTAGTCAATCAATTAATAGAGCAGTTAATAAAAGGAAAGGTTCTATCTGGCATGGG 2355
QY 2279 TGCCCGCCCAACAGGGCATCGCGGCGCAACGAGCAGATCGACAAGCTGGTGAGCAAGGGCA 2338
Db 2356 TACCAGCACACAAGGAATTGGAGGAATGAACAAGTAGATAATTAGTCAGTGTGGAA 2415
QY 2339 TCGCGAAGTGTGTTCTCGGAGCGGCATCGAT 2370
Db 2416 TCAGGAAAGTACTATTTTAGATGGAATAGAT 2447

RESULT 13
US-09-735-487-11
; Sequence 11, Application US/09735487
; Patent No. 6528251
; GENERAL INFORMATION:
; APPLICANT: de BETHUNE, Marie-Pierre
; APPLICANT: HERTOGS, Kurt
; APPLICANT: FAUWELS, Rudi
; TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE
; TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY
; TITLE OF INVENTION: OF HUMAN HIV STRAINS
; FILE REFERENCE: 1377-125P
; CURRENT APPLICATION NUMBER: US/09/735,487
; PRIOR FILING DATE: 2000-12-14
; PRIOR FILING DATE: 09/117,217
; NUMBER OF SEQ ID NOS: 15
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 11
; LENGTH: 2601
; TYPE: DNA
; ORGANISM: HIV-HXB2
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (453)..(749)
; OTHER INFORMATION: Protease
US-09-735-487-11

Query Match 45.8%; Score 1132; DB 4; Length 2601;
Best Local Similarity 68.5%; Pred. No. 1.7e-177;
Matches 1626; Conservative 0; Mismatches 730; Indels 16; Gaps 4;

QY 14 TGCCGAGGCGCATGACCCAGGCGCACCA---GGCCAAACATCTCTGATGCGAGCGAGCAACT 70
Db 77 TGGCTGAAGCAATGAGCCCAAGTAACAAATTCAGTACCATAATGATGCGAGAGGCAATT 136
QY 71 TCAAGGGCCCCAAGCGCATCATCAAGTGTCTCAATCTGCGGCAAGGAGGCCCATGCGCC 130
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Db 137 TTAGGAACCAAGAAAGATTGTTAAGTGTTCATTTCTGCAAGAGGACACACAGCCA 196
QY 131 GCAACTCGCCGCGCCCGCCCGCAAGAGGCTGTGGAAGTCCGCAAGAGGCGCCACAGA 190
Db 197 GAAATTGCAAGGGCCCTTAGGAAAAAGGGCTGTTGGAATGTGGAAGGAAGGACACCAAA 256
QY 191 TGAAGACTCGACCGAGCGCCAGCCCAACTTCTTCGCGAGGACCTGGCCCTTCCCCAGG 250
Db 257 TGAAGATTGTACTGAGACAGGCTAA-TTTTGTAGGGAAGATCTGGCCCTTCTTCAAG 315
QY 251 GCAAGCCCGCGAGTTCCTCCAGCAGACAGCCGCAACAGCCCGCCACAGCGCGGAGC 310
Db 316 GGAAGCCAGGGAATTTCTTCAGAGCAGACCAAGCCCAACAGCCCGCCACAGAGAGGC 375
QY 311 TGCAGGTGCGCG- - - - -CGACAACCCCGCAGAGCGCGCGCGCGCGAGCGCAAGGCA 364
Db 376 TTAGGTCTGGGTGAGAGCAACAACCTCCCTCTCAGAAGCAGGAGCGCATAGACAAGAA 435
QY 365 - - - - -CCCTGAACTTCCCGCAGATCACCTGTGGGCGCGCCCTGTGTCAGCATCAAGG 418
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 Qy 1379 CCGAAGTGAAGCCCTGACGCTGACCTCCGAGAGAGAGCTGACCTGAGACG 1438  
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 US-09-735-487-13  
 ; Sequence 13, Application US/09735487  
 ; Patent No. 6528251  
 ; GENERAL INFORMATION:  
 ; APPLICANT: de BETHUNE, Marie-Pierre  
 ; APPLICANT: HERIGOS, Rudi  
 ; APPLICANT: PAUMELS, Rudi  
 ; TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE  
 ; TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY  
 ; FILE REFERENCE: 1377-125P  
 ; CURRENT APPLICATION NUMBER: US/09/735,487  
 ; PRIORITY FILING DATE: 2000-12-14  
 ; PRIORITY APPLICATION NUMBER: 09/117,217  
 ; PRIORITY FILING DATE: 1998-07-24  
 ; NUMBER OF SEQ ID NOS: 15  
 ; SOFTWARE: PatentIn Ver. 2.0  
 ; SEQ ID NO 13  
 ; LENGTH: 2601  
 ; TYPE: DNA  
 ; ORGANISM: HIV-HXB2  
 ; FEATURE:  
 ; NAME/KEY: CDS  
 ; LOCATION: (750)..(2435)  
 ; OTHER INFORMATION: Reverse Transcriptase  
 US-09-735-487-13  
 Query Match 45.8%; Score 1132; DB 4; Length 2601;  
 Best Local Similarity 68.5%; Pred. No. 1.7e-177;  
 Matches 1626; Conservative 0; Mismatches 730; Indels 16; Gaps 4;  
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QY 479 AGATGAGCCTCCCGGCAAGTGAAGCCCAAGATGATCGCGGCATCGCGGCTTTCATCA 538  
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 ; Sequence 1, Application US/09552950  
 ; Patent No. 6541248  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Oxford Biomedica (UK) Limited  
 ; TITLE OF INVENTION: Anti-Viral Vectors  
 ; FILE REFERENCE: 674524-2004  
 ; CURRENT APPLICATION NUMBER: US/09/552,950  
 ; CURRENT FILING DATE: 2000-04-20  
 ; NUMBER OF SEQ ID NOS: 22  
 ; SOFTWARE: Patentin Ver. 2.1  
 ; SEQ ID NO 1  
 ; LENGTH: 4307  
 ; TYPE: DNA  
 ; ORGANISM: Human immunodeficiency virus

US-09-552-950-1

Query Match 45.8%; Score 1132; DB 4; Length 4307;  
 Best Local Similarity 68.5%; Pred. No. 1.7e-177;  
 Matches 1626; Conservative 0; Mismatches 730; Indels 16; Gaps 4;

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Db 121 GCCCGACATCCCGGCCCCCGCAAGAGGCTGCTGAGATGCGGCAAGAGGCGAC 180  
 QY 187 CAGATGAAGGATCTGCAACCGAGCGCCCAACTTCTTCGCGAGGACTGTGCTTCCC 246  
 Db 181 CAGATGAAGGATCTGCAACCGAGCGCCCAACTTCTTCGCGAGGACTGTGCTTCCC 240  
 QY 247 CAGGCGAAGGCGCGGAGTTCCCGACGAGCAAAACCGCGCCCAAGCCCCACAGCGCG 306  
 Db 241 CAGGCGAAGGCGCGGAGTTCCCGACGAGCAAAACCGCGCCCAAGCCCCACAGCGCG 300  
 QY 307 GAGCTGCAAGTGCAGGCGCAACCCCGCGAGCGCGCGCGCGCGCGCGCGCGCGCGCG 366  
 Db 301 GAGCTGCAAGTGCAGGCGCAACCCCGCGAGCGCGCGCGCGCGCGCGCGCGCGCGCG 360  
 QY 367 CTGAATCTTCCCCAGATCAACCTGTGGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 426  
 Db 361 CTGAATCTTCCCCAGATCAACCTGTGGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 420  
 QY 427 CAGATCAAGAGAGCCCTGTGTGACAACCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 486  
 Db 421 CAGATCAAGAGAGCCCTGTGTGACAACCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 480  
 QY 487 CTGCGCGCGCAAGTGAAGCCCAAGATGATCGCGCGCGCGCGCGCGCGCGCGCGCGCG 546  
 Db 481 CTGCGCGCGCAAGTGAAGCCCAAGATGATCGCGCGCGCGCGCGCGCGCGCGCGCGCG 540  
 QY 547 CAGTACGACCAAGATCTGTATCGAGATCTGCGGCAAGAGGCCATCGGCGCGCGCGCGCG 606  
 Db 541 CAGTACGACCAAGATCTGTATCGAGATCTGCGGCAAGAGGCCATCGGCGCGCGCGCGCG 600  
 QY 607 GAGCG 666  
 Db 601 GAGCG 660  
 QY 667 AACTTCCCCATTAAGCCCCCATGAGACCGTGCCTGGAAGCTGAAACCGCGCGCGCGCG 726  
 Db 661 AACTTCCCCATTAAGCCCCCATGAGACCGTGCCTGGAAGCTGAAACCGCGCGCGCGCG 720  
 QY 727 CCAAGGTGAAGCAATGCGCCCTGACCGGAGAGAGATCAAGGCCCTGACCGCGCGCGCGCG 786  
 Db 721 CCAAGGTGAAGCAATGCGCCCTGACCGGAGAGAGATCAAGGCCCTGACCGCGCGCGCGCG 780  
 QY 787 GAGGAGATGGAAGAGAGAGAGAGAGATCAACCAAGATCGGCGCGCGCGCGCGCGCGCG 846  
 Db 781 GAGGAGATGGAAGAGAGAGAGAGAGATCAACCAAGATCGGCGCGCGCGCGCGCGCGCG 840  
 QY 847 CCGCGTTCCGCAATTAAGAGAGAGAGAGAGATCAACCAAGATCGGCGCGCGCGCGCGCG 906  
 Db 841 CCGCGTTCCGCAATTAAGAGAGAGAGAGAGATCAACCAAGATCGGCGCGCGCGCGCGCG 900  
 QY 907 GAGCTGAACAAGCGCACCCAGGACTTCTGTGAGGTGCACTGAGCATCCCGCACCCCGCG 966  
 Db 901 GAGCTGAACAAGCGCACCCAGGACTTCTGTGAGGTGCACTGAGCATCCCGCACCCCGCG 960  
 QY 967 GAGCTGAAGAAG 1026  
 Db 961 GAGCTGAAGAAG 1020  
 QY 1027 CCGCGTGAAG 1086  
 Db 1021 CCGCGTGAAG 1080  
 QY 1087 ACCCGCGGCAATCCGCTTACCAAGTCAACGCTGCGCGCGCGCGCGCGCGCGCGCGCGCG 1146  
 Db 1081 ACCCGCGGCAATCCGCTTACCAAGTCAACGCTGCGCGCGCGCGCGCGCGCGCGCGCGCG 1140  
 QY 1147 ATCTTCCAG 1206  
 Db 1141 ATCTTCCAG 1200  
 QY 1207 GTGATCTACAGATCATGAG 1266  
 Db 1201 GTGATCTACAGATCATGAG 1260

QY 1267 CGCGCAAGATCGAG 1326  
 Db 1261 CGCGCAAGATCGAG 1320  
 QY 1327 AAGAGCAACCAAG 1386  
 Db 1321 AAGAGCAACCAAG 1380  
 QY 1387 TGAGACGTGCAAGCCCATGAGCTGCGCGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 1446  
 Db 1381 TGAGACGTGCAAGCCCATGAGCTGCGCGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 1440  
 QY 1447 AAGCGTGGGCGAAGCTGAACTGGGCGCAGCCAGATCTAACCCCGGCACTTAAGGTGCGCAG 1506  
 Db 1441 AAGCGTGGGCGAAGCTGAACTGGGCGCAGCCAGATCTAACCCCGGCACTTAAGGTGCGCAG 1500  
 QY 1507 CTGTGCAAGCTGCG 1566  
 Db 1501 CTGTGCAAGCTGCG 1560  
 QY 1567 GCCGAGCTGAGAGCTGGCCGAGAACCGCGAGATCTGTGCGCGAGCCCGGTGCAACGCGGTGAC 1626  
 Db 1561 GCCGAGCTGAGAGCTGGCCGAGAACCGCGAGATCTGTGCGCGAGCCCGGTGCAACGCGGTGAC 1620  
 QY 1627 TACGACCCGACGAG 1686  
 Db 1621 TACGACCCGACGAG 1680  
 QY 1687 TACGAGATCTACAG 1746  
 Db 1681 TACGAGATCTACAG 1740  
 QY 1747 ACCGCGCAACCAAG 1806  
 Db 1741 ACCGCGCAACCAAG 1800  
 QY 1807 AGCATGATGATCTGGGCGAG 1866  
 Db 1801 AGCATGATGATCTGGGCGAG 1860  
 QY 1867 GAGACCTGTGAG 1926  
 Db 1861 GAGACCTGTGAG 1920  
 QY 1927 ACCCG 1986  
 Db 1921 ACCCG 1980  
 QY 1987 ACCCTTACAGTGAAG 2046  
 Db 1981 ACCCTTACAGTGAAG 2040  
 QY 2047 ACCGACCGGCG 2106  
 Db 2041 ACCGACCGGCG 2100  
 QY 2107 CTGAGAGCGATCCAGCTGGGCG 2166  
 Db 2101 CTGAGAGCGATCCAGCTGGGCG 2160  
 QY 2167 AGCGAGTACGCCCTGTGAGATCATGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 2226  
 Db 2161 AGCGAGTACGCCCTGTGAGATCATGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 2220  
 QY 2227 AACCGATCATTCAG 2286  
 Db 2221 AACCGATCATTCAG 2280  
 QY 2287 CACAGAGGAGATCGGCGAG 2346  
 Db 2281 CACAGAGGAGATCGGCGAG 2340





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QY 1621 GTGTACTACGACCCCGACGACGACCTGTGTGCGGAGATCCAGAGCGAGGCCACGACG 1680
DB 1615 GTGTACTACGACCCCGACGACGACCTGTGTGCGGAGATCCAGAGCGAGGCCACGACG 1674
QY 1681 TGGACTTACGACGATCTTACGAGAGGACCTTCAAGAACTTGAAGACCGGCAAGTACGCGCAAG 1740
DB 1675 TGGACTTACGACGATCTTACGAGAGGACCTTCAAGAACTTGAAGACCGGCAAGTACGCGCAAG 1734
QY 1741 ATGCGGACGCGCCCAACGACGACGATGAGCGGATGACCGGAGCGGTGAGAAAGTCCGCG 1800
DB 1735 ATGCGGACGCGCCCAACGACGACGATGAGCGGATGACCGGAGCGGTGAGAAAGTCCGCG 1794
QY 1801 ATGAGAGCATCGTGTGTGAGCGGACGACGACGATGAGCGGATGAGCGGATGAGCGGATGAGCGG 1860
DB 1795 ATGAGAGCATCGTGTGTGAGCGGACGACGACGATGAGCGGATGAGCGGATGAGCGGATGAGCGG 1854
QY 1861 ACCCTGGAGACCTGTGTGAGCGGACGACGACGATGAGCGGATGAGCGGATGAGCGGATGAGCGG 1920
DB 1855 ACCCTGGAGACCTGTGTGAGCGGACGACGACGATGAGCGGATGAGCGGATGAGCGGATGAGCGG 1914
QY 1921 GTGACACACCCCGGCGGAGGATGAGCGGATGAGCGGATGAGCGGATGAGCGGATGAGCGG 1980
DB 1915 GTGACACACCCCGGCGGAGGATGAGCGGATGAGCGGATGAGCGGATGAGCGGATGAGCGG 1974
QY 1981 GCGGACGACCTTCTACGAGGACGCGCGCGGACGCGGACGCGGACGCGGACGCGGACGCGG 2040
DB 1975 GCGGACGACCTTCTACGAGGACGCGCGCGGACGCGGACGCGGACGCGGACGCGGACGCGG 2034
QY 2041 TACGAGACGACCGCGGCGGCGGAGGATGAGCGGATGAGCGGATGAGCGGATGAGCGGATGAGCGG 2100
DB 2035 TACGAGACGACCGCGGCGGCGGAGGATGAGCGGATGAGCGGATGAGCGGATGAGCGGATGAGCGG 2094
QY 2101 ACCGAGCTGAGCGGACGCGGCGGAGGATGAGCGGATGAGCGGATGAGCGGATGAGCGG 2160
DB 2095 ACCGAGCTGAGCGGACGCGGCGGAGGATGAGCGGATGAGCGGATGAGCGGATGAGCGGATGAGCGG 2154
QY 2161 ACCGAGCTGAGCGGACGCGGCGGAGGATGAGCGGATGAGCGGATGAGCGGATGAGCGG 2220
DB 2155 ACCGAGCTGAGCGGACGCGGCGGAGGATGAGCGGATGAGCGGATGAGCGGATGAGCGGATGAGCGG 2214
QY 2221 CTGTGTGACGACGATCATGAGCGGATGAGCGGATGAGCGGATGAGCGGATGAGCGGATGAGCGG 2280
DB 2215 CTGTGTGACGACGATCATGAGCGGATGAGCGGATGAGCGGATGAGCGGATGAGCGGATGAGCGG 2274
QY 2281 CCGCGCCACGAGGCGGATGAGCGGCGGACGAGCGGATGAGCGGATGAGCGGATGAGCGGATGAGCGG 2340
DB 2275 CCGCGCCACGAGGCGGATGAGCGGCGGACGAGCGGATGAGCGGATGAGCGGATGAGCGGATGAGCGG 2334
QY 2341 CCGAGAGTGTCTGTCTGTGACGCGGATGAGCGGCGGATGAGCGGATGAGCGGATGAGCGGATGAGCGG 2400
DB 2335 CCGAGAGTGTCTGTCTGTGACGCGGATGAGCGGCGGATGAGCGGATGAGCGGATGAGCGGATGAGCGG 2394
QY 2401 GACCTGTACGAGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGG 2460
DB 2395 GACCTGTACGAGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGG 2454
QY 2461 GGT 2463
DB 2455 GGT 2457

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RESULT 3  
US-10-190-435-43

; Sequence 43, Application US/10190435  
; Publication No. US20030143248A1

; GENERAL INFORMATION:

; APPLICANT: ZUR MEGEDE, Jan  
; APPLICANT: BARNETT, Susan W.

; APPLICANT: LIAN, Ying

; APPLICANT: ENGELBRECHT, Susan

; APPLICANT: VAN RENSBURG, Estrellita J.

; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C  
; POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF

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; FILE REFERENCE: PP18133.003 / 2302-18133
; CURRENT APPLICATION NUMBER: US/10/190,435
; CURRENT FILING DATE: 2002-12-30
; NUMBER OF SEQ ID NOS: 319
; SOFTWARE: Patent Ver. 2.0
; SEQ ID NO 43
; LENGTH: 2445
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: p2pol.opt.YMMW_C
US-10-190-435-43

Query Match      97.3%; Score 2401.8; DB 12; Length 2445;
Best Local Similarity 99.2%; Pred. No. 0;
Matches 2438; Conservative 0; Mismatches 7; Indels 12; Gaps 2;

QY 7 GCCACCATGCGCGGACGATGAGCCGACGACGCGCAACATCTGATGAGCGGACG 66
DB 1 GCCACCATGCGCGGACGATGAGCCGACGACGCGCAACATCTGATGAGCGGACG 60
QY 67 AACTTCAAGGCGCCCGAAGCGCATCATCAAGTCTTCACTGCGGCAAGAGGCGCAATC 126
DB 61 AACTTCAAGGCGCCCGAAGCGCATCATCAAGTCTTCACTGCGGCAAGAGGCGCAATC 120
QY 127 GCCCGCACTGCGCGCGCGCGCGCGAAGAGGCTGCTGAAAGTGGCGCAAGAGGCGCAC 186
DB 121 GCCCGCACTGCGCGCGCGCGCGCGAAGAGGCTGCTGAAAGTGGCGCAAGAGGCGCAC 180
QY 187 CAGATGAAGAAGCTGACCGGACGCGCGCAAGCTTCTTCCGCGAGGACCTTGCTCCCG 246
DB 181 CAGATGAAGAAGCTGACCGGACGCGCGCAAGCTTCTTCCGCGAGGACCTTGCTCCCG 240
QY 247 CAGGCGAAGGCGCGCGGAGGATGAGCGGCGGAGGAGGCGGCGGAGGCGGCGGCGGCGG 306
DB 241 CAGGCGAAGGCGCGCGGAGGATGAGCGGCGGAGGAGGCGGCGGAGGCGGCGGCGGCGG 300
QY 307 GAGCTGCGAGTGCAGCGCGGACGACCGCGCGAGCGGCGGCGGCGGCGGCGGCGGCGGCGG 366
DB 301 GAGCTGCGAGTGCAGCGCGGACGACCGCGCGAGCGGCGGCGGCGGCGGCGGCGGCGGCGG 360
QY 367 CTGAACTTCCCGGAGATCACTGTGAGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGG 426
DB 361 CTGAACTTCCCGGAGATCACTGTGAGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGG 420
QY 427 CAGATCAAGAGGCGCGCTGTGACGCGGCGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGG 486
DB 421 CAGATCAAGAGGCGCGCTGTGACGCGGCGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGG 480
QY 487 CTGCGCGGCAAGTGAAGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGG 546
DB 481 CTGCGCGGCAAGTGAAGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGG 540
QY 547 CAGTTCGACGAGATCTTATGAGATCTGCGGCGAAGAGGCGCATGAGCGGCTGTATC 606
DB 541 CAGTTCGACGAGATCTTATGAGATCTGCGGCGAAGAGGCGCATGAGCGGCTGTATC 600
QY 607 GGCGCCACCGCGGTGAACATCATGAGCGGCGGCAACATGTCAGCCAGCTGGGCTGCACCGCTG 666
DB 601 GGCGCCACCGCGGTGAACATCATGAGCGGCGGCAACATGTCAGCCAGCTGGGCTGCACCGCTG 660
QY 667 AACTTCCCATGAGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGG 726
DB 661 AACTTCCCATGAGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGG 720
QY 727 CCCAAGGTGAAGCACTGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGG 786
DB 721 CCCAAGGTGAAGCACTGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGG 780
QY 787 GAGGAGATGAGGAAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGG 846
DB 781 GAGGAGATGAGGAAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGG 840

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QY 847 CCGTGTTCCCATCAAGAAAGAGACAGACCAAGTGGCGCAAGCTGTGTGACTTCCGC 906
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Db 841 CCGGTGTTCCCATCAAGAAAGAGACAGACCAAGTGGCGCAAGCTGTGTGACTTCCGC 900
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|
QY 907 GAGCTGAACAGGCGACACAGACTTCTGGAGGTGCAGTGGGCAATCCCCACCCCGCC 966
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|
Db 901 GAGCTGAACAGGCGACACAGACTTCTGGAGGTGCAGTGGGCAATCCCCACCCCGCC 960
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QY 967 GGCCTGAACAGAAAGAGCGTACCGTGTGGAGTGGGCGAGCCCTACTTCAAGCGT 1026
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Db 961 GGCCTGAACAGAAAGAGCGTACCGTGTGGAGTGGGCGAGCCCTACTTCAAGCGT 1020
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QY 1027 CCCCCTGGACGAGACTTCCGCAAGTACACCGCTTCAACCATCCCCAGCATCAACACGAG 1086
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QY 1087 ACCCCCGGATCGCTACAGATACAGCTGTGCCCCAGGGCTGGAAGGCGAGCCCGACG 1146
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|
|
Db 1081 ACCCCCGGATCGCTACAGATACAGCTGTGCCCCAGGGCTGGAAGGCGAGCCCGACG 1140
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|
QY 1147 ATCTTCCAGAGCAGCATGACCAAGATCTTGGAGCCCTTCGGGCGCGCAACCCGAGATC 1206
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|
Db 1141 ATCTTCCAGAGCAGCATGACCAAGATCTTGGAGCCCTTCGGGCGCGCAACCCGAGATC 1200
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|
QY 1207 GTGATCTACAGTACATGACGACCTGTAGCTGGGCGAGCAGCTGGAGATCGGCCAGCAC 1266
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Db 1201 GTGATCTACCA-----GGCCCCCTGTAGCTGGGCGAGCAGCTGGAGATCGGCCAGCAC 1254
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|
QY 1267 CCGGCCAAGATCGAGAGCTGCGCAAGCAGCTGCTGCGCTGGGGCTTACACACCCCGAC 1326
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|
Db 1255 CCGGCCAAGATCGAGAGCTGCGCAAGCAGCTGCTGCGCTGGGGCTTACACACCCCGAC 1314
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|
QY 1327 AAGAAGCACAGAAAGAGCCCCCTTCTGTGTGATGGGTACGAGCTGCACCCCGACAAG 1386
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|
Db 1315 AAGAAGCACAGAAAGAGCCCCCTTCTGTGCCAT-----CGAGCTGCACCCCGACAAG 1368
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|
QY 1387 TGGACCGTGCAGCCCATCGAGCTGCCGGAAGAGAGCTGGACCGTGAACGACATCCAG 1446
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|
Db 1369 TGGACCGTGCAGCCCATCGAGCTGCCGGAAGAGAGCTGGACCGTGAACGACATCCAG 1428
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|
QY 1447 AAGCTGTTGGGAGCTGAATCTGGGCGAGCAGATCTACCCCGCATCAAGTGGCCCGAG 1506
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|
|
Db 1429 AAGCTGTTGGGAGCTGAATCTGGGCGAGCAGATCTACCCCGCATCAAGTGGCCCGAG 1488
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|
QY 1507 CTGTGAAGCTGCTGGCGGCGCAAGGCCCTGACCGACATGCTGCTGACCGAGGAG 1566
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|
Db 1489 CTGTGAAGCTGCTGGCGGCGCAAGGCCCTGACCGACATGCTGCTGACCGAGGAG 1548
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|
QY 1567 GCGAGCTGGAGTGGCCGAGAACCGCGAGATCTCTGGGAGCCCGTGCACGGCGGTGAC 1626
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Db 1549 GCGAGCTGGAGTGGCCGAGAACCGCGAGATCTCTGGGAGCCCGTGCACGGCGGTGAC 1608
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|
QY 1627 TAGGACCCAGCAAGACCTGTGTGGCGGAGATCCAGAACGAGGCCACGACGAGTGACC 1686
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|
|
Db 1609 TAGGACCCAGCAAGACCTGTGTGGCGGAGATCCAGAACGAGGCCACGACGAGTGACC 1668
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|
|
QY 1687 TACAGATCTACAGAGCCCTTCAAGACCTGAAGACCGGCAAGTACGCAAGATGCGC 1746
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Db 1669 TACAGATCTACAGAGCCCTTCAAGACCTGAAGACCGGCAAGTACGCAAGATGCGC 1728
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QY 1747 ACCGCCACACCAAGCGTGAAGCAGCTGACCGAGGCCGTGACAGAGATCGCATGGAG 1806
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|
Db 1729 ACCGCCACACCAAGCGTGAAGCAGCTGACCGAGGCCGTGACAGAGATCGCATGGAG 1788
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|
|
QY 1807 AGCATGCTGATCTGGGGCAAGACCCCAAGTTCCGCTGCCCCATCCAGAAAGGAGACTGG 1866
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|
Db 1789 AGCATGCTGATCTGGGGCAAGACCCCAAGTTCCGCTGCCCCATCCAGAAAGGAGACTGG 1848
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|
|
QY 1867 GAGACCTGTGGACCGACTACTGGAGGCCACCTGATCCCGAGTGGGAGTTCTGTGAAC 1926
|
|
|
Db 1849 GAGACCTGTGGACCGACTACTGGAGGCCACCTGATCCCGAGTGGGAGTTCTGTGAAC 1908
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|
QY 1927 ACCCCCCCTGTGTGAAGCTGTGTACAGCTGGAGAGGAGGCCCATCATTCGGCGCGAG 1986
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Db 1909 ACCCCCCCTGTGTGAAGCTGTGTGTACAGCTGGAGAAAGAGCCCATCATTCGGCGCGAG 1968
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|
QY 1987 ACCTTCTAGTGGAGCGCGCCGCAACCGCGAGACCAAGATCGGCAAGCGGCTACGTG 2046
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|
|
Db 1969 ACCTTCTAGTGGAGCGCGCCGCAACCGCGAGACCAAGATCGGCAAGCGGCTACGTG 2028
|
|
|
QY 2047 ACCGACCGGGCGCGGACAGAAATCTGTAGCTGTGACCGAGACCAACACAGAAAGCCGAG 2106
|
|
|
Db 2029 ACCGACCGGGCGCGGACAGAAATCTGTAGCTGTGACCGAGACCAACACAGAAAGCCGAG 2088
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|
|
QY 2107 CTGCAAGGCATCTACCTGCGCTTCCAGCAAGCGCGAGCGAGTGAACATCTGTGACCGAC 2166
|
|
|
Db 2089 CTGCAAGGCATCTACCTGCGCTTCCAGCAAGCGCGAGCGAGTGAACATCTGTGACCGAC 2148
|
|
|
QY 2167 AGCAGTACCGCTTGGGCGATCATTCAGCGCCGAGCCGCAAGAGCGAGCGAGCTGGT 2226
|
|
|
Db 2149 AGCAGTACCGCTTGGGCGATCATTCAGCGCCGAGCCGCAAGAGCGAGCGAGCTGGT 2208
|
|
|
QY 2227 AACCAAGTATCGAGCAGCTGATCAAGAGAGAAAGTGTACTGTAGCTGGGTGCCCGCC 2286
|
|
|
Db 2209 AACCAAGTATCGAGCAGCTGATCAAGAGAGAAAGTGTACTGTAGCTGGGTGCCCGCC 2268
|
|
|
QY 2287 CACAAGGCGATCGCGGCAACGAGCAGATCGAAGCTGTGTGAGCAAGGCGATCCGCAAG 2346
|
|
|
Db 2269 CACAAGGCGATCGCGGCAACGAGCAGATCGAAGCTGTGTGAGCAAGGCGATCCGCAAG 2328
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|
|
QY 2347 GTGCTGTTCTTGGAGCGGCATCGATCGCGGCATCTGATCCAGTACAGTACGACGACCTG 2406
|
|
|
Db 2329 GTGCTGTTCTTGGAGCGGCATCGATCGCGGCATCTGATCTACAGTACATGAGCGACCTG 2388
|
|
|
QY 2407 TACGTGGGCGAGCGCGGCGCTAGGATCGATTAAAGATTTCCCGGGCTAGCACCGGT 2463
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Db 2389 TACGTGGGCGAGCGCGGCGCTAGGATCGATTAAAGATTTCCCGGGCTAGCACCGGT 2445
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## RESULT 4

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US-10-190-435-9
; Sequence 9, Application US/10190435
; Publication No. US20030143248A1
; GENERAL INFORMATION:
; APPLICANT: ZUR MEGEDE, Jan
; APPLICANT: BARNETT, Susan W.
; APPLICANT: LIAN, Ying
; APPLICANT: ENGELBRECHT, Susan
; APPLICANT: VAN RENSBURG, Estrelita J.
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
; FILE REFERENCE: PP18133.003 / 2302-18133
; CURRENT APPLICATION NUMBER: US/10/190,435
; CURRENT FILING DATE: 2002-12-30
; NUMBER OF SEQ ID NOS: 319
; SOFTWARE: PatentIn ver. 2.0
; SEQ ID NO 9
; LENGTH: 3930
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: GagCompPolmut_C
US-10-190-435-9
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Query Match 97.0%; Score 2394.8; DB 12; Length 3930;
Best Local Similarity 99.2%; Pred. No. 0;
Matches 2431; Conservative 0; Mismatches 7; Indels 12; Gaps 2;

QY 14 TGGCCGAGCCATGAGCCAGGCCAGCCAGCCCAACATCTGTATGAGCGCAGCACTTCA 73
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|
|
Db 1487 TGGCCGAGCCATGAGCCAGGCCAGCCAGCCCAACATCTGTATGAGCGCAGCACTTCA 1546
|
|
|
QY 74 AGGGCCCCAAGCGCATCATCAAGTCTTCAATCGCGCAAGAGGGGCCACATCGCCCCGA 133
|
|
|
Db 1547 AGGGCCCCAAGCGCATCATCAAGTCTTCAATCGCGCAAGAGGGGCCACATCGCCCCGA 1606
|
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|
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QY 134 ACTGCCGCGCCCCCGGCAAGAAGGGCTGTGAGATGCGGCAAGAGGGCCACGAGATGA 193  
Db 1607 ACTGCCGCGCCCCCGGCAAGAAGGGCTGTGAGATGCGGCAAGAGGGCCACGAGATGA 1666  
QY 194 AGGACTGCAACGAGCGCCAGGCACTTCTTCCGGAAGACTTGCCCTTCCCCAGGGCA 253  
Db 1667 AGGACTGCAACGAGCGCCAGGCACTTCTTCCGGAAGACTTGCCCTTCCCCAGGGCA 1726  
QY 254 AGGCGCGGAGGTTCCCGGCGGAGAACCGCGCCACAGCCCCCAAGCGCGGAGCTGC 313  
Db 1727 AGGCGCGGAGGTTCCCGGCGGAGAACCGCGCCACAGCCCCCAAGCGCGGAGCTGC 1786  
QY 314 AGGTGCGCGGAGAACCCCCCGGCAAGCGCGCGCGCGGCGGCGGCACTCTGAAGCT 373  
Db 1787 AGGTGCGCGGAGAACCCCCCGGCAAGCGCGCGCGCGGCGGCGGCACTCTGAAGCT 1846  
QY 374 TCCCCAGATCACTCTGTGGCAAGCGCCCTGTGTAGCATCAAGTGGGCGGCGGATCA 433  
Db 1847 TCCCCAGATCACTCTGTGGCAAGCGCCCTGTGTAGCATCAAGTGGGCGGCGGATCA 1906  
QY 434 AGGAGGCCCTGTGGACAACCGGCGCGGCAAGCACCGTGTGGAGGAGATGAGCTGCCG 493  
Db 1907 AGGAGGCCCTGTGGACAACCGGCGCGGCAAGCACCGTGTGGAGGAGATGAGCTGCCG 1966  
QY 494 GCAAGTGAAGCCCAAGATGATCGGCGGCAATCGGCGCTTCAACAAGTGGCGCGGATAG 553  
Db 1967 GCAAGTGAAGCCCAAGATGATCGGCGGCAATCGGCGCTTCAACAAGTGGCGCGGATAG 2026  
QY 554 ACCAGATCTGATGAGATCTTGGCGGCAAGAGGCAATGGGCACTGGTGTGATGGCCCA 613  
Db 2027 ACCAGATCTGATGAGATCTTGGCGGCAAGAGGCAATGGGCACTGGTGTGATGGCCCA 2086  
QY 614 CCCCCGTGAATCATCGGCGGCAACATGCTGACACGCTGGGCTGCACTCTGAAGCTTCC 673  
Db 2087 CCCCCGTGAATCATCGGCGGCAACATGCTGACACGCTGGGCTGCACTCTGAAGCTTCC 2146  
QY 674 CCATCAGCCCATCGAGACCGTGCCTGTGAAGCTTGAAGCCCGGCAATGAGCGGCCCAAG 733  
Db 2147 CCATCAGCCCATCGAGACCGTGCCTGTGAAGCTTGAAGCCCGGCAATGAGCGGCCCAAG 2206  
QY 734 TGAAGCATGGCCCCCTGACCGAGAGAGAGATCAAGGCTTGAACCGGCAATCTTGGAGAGA 793  
Db 2207 TGAAGCATGGCCCCCTGACCGAGAGAGAGATCAAGGCTTGAACCGGCAATCTTGGAGAGA 2266  
QY 794 TGGAGAAGGAGGCGCAAGATCAACAGATCGGCGCGGCAAGACCCCTACAAACACCCGCTGT 853  
Db 2267 TGGAGAAGGAGGCGCAAGATCAACAGATCGGCGCGGCAAGACCCCTACAAACACCCGCTGT 2326  
QY 854 TCGCCATCAAGAAGAGAGACAGCACCAAGTGGCGCAAGCTGTGAGATTTCCGCGAGCTGA 913  
Db 2327 TCGCCATCAAGAAGAGAGACAGCACCAAGTGGCGCAAGCTGTGAGATTTCCGCGAGCTGA 2386  
QY 914 ACAAGCGCACCCAGAGACTTCTGGAGAGTGCAGACTGGGCAATCCCCAACCCCGCGGCGCTGA 973  
Db 2387 ACAAGCGCACCCAGAGACTTCTGGAGAGTGCAGACTGGGCAATCCCCAACCCCGCGGCGCTGA 2446  
QY 974 AGAAGAAGAGGCTGTGACCGTGTGAGAGTGGGCGAGCGCTACTTCAAGCTGCCCTGTG 1033  
Db 2447 AGAAGAAGAGGCTGTGACCGTGTGAGAGTGGGCGAGCGCTACTTCAAGCTGCCCTGTG 2506  
QY 1034 ACAGAGACTTCCGCAAGTACACCGCTTCAACCATCCCGAGCATCAACAGAGACCCCG 1093  
Db 2507 ACAGAGACTTCCGCAAGTACACCGCTTCAACCATCCCGAGCATCAACAGAGACCCCG 2566  
QY 1094 GCATCGGCTACAGTACAAAGTGTGCGCCAGGCGTGGAGAGGGCGAGCCCGAGCATCTTCC 1153  
Db 2567 GCATCGGCTACAGTACAAAGTGTGCGCCAGGCGTGGAGAGGGCGAGCCCGAGCATCTTCC 2626  
QY 1154 AGAGCAGCATGACCAAGATCTCTGAGACCTTTCGCGCGCGCAACCCCGAGATCTGATCT 1213  
Db 2627 AGAGCAGCATGACCAAGATCTCTGAGACCTTTCGCGCGCGCAACCCCGAGATCTGATCT 2686  
QY 1214 ACCAGTACATGAGCAGACTGTACGTGGGCGAGCACTTGGAGATCGGCGGCGCA 1273

Db 2687 ACCH-----GGCCCCCTGTACGTGGGCGAGGACCTTGAGATCGGCGAGACCGGCCCA 2740  
QY 1274 AGATCGAGAGAGCTGCGGGAACCACTGCTGTGGCTTGGGGCTTCAACACCCCCGAGCAAGAGC 1333  
Db 2741 AGATCGAGAGAGCTGCGGGAACCACTGCTGTGGCTTGGGGCTTCAACACCCCCGAGCAAGAGC 2800  
QY 1334 ACCGAGAGAGAGCCCCCTTCTCTGTGATGGGCTACGAGCTGCAACCCCGCAAGTGGAGC 1393  
Db 2801 ACCGAGAGAGAGCCCCCTTCTCTGTGATGGGCTACGAGCTGCAACCCCGCAAGTGGAGC 2854  
QY 1394 TGCAGCCCATCGAGCTTCCCGAGAGAGAGCTTGAACCTGTGAACGACATCCAGAGCTGG 1453  
Db 2855 TGCAGCCCATCGAGCTTCCCGAGAGAGAGCTTGAACCTGTGAACGACATCCAGAGCTGG 2914  
QY 1454 TGGGCAAGCTGGAATGAGGCGGCAAGCTGATCTTACCCCCGAGATCAAGTGGCGGAGTGGCA 1513  
Db 2915 TGGGCAAGCTGGAATGAGGCGGCAAGCTGATCTTACCCCCGAGATCAAGTGGCGGAGTGGCA 2974  
QY 1514 AGCTGCTGCGGCGGCGCAAGGCGCTGACCGACATCGTGCCTGTGACCGAGAGGCGCGAGC 1573  
Db 2975 AGCTGCTGCGGCGGCGGCGCAAGGCGCTGACCGACATCGTGCCTGTGACCGAGAGGCGCGAGC 3034  
QY 1574 TGGAGCTTGGCGGAGAACCGGAGATCTTGGCGGAGCCGTGACAGGCGTGTACTTACGAGC 1633  
Db 3035 TGGAGCTTGGCGGAGAACCGGAGATCTTGGCGGAGCCGTGACAGGCGTGTACTTACGAGC 3094  
QY 1634 CCAAGCAAGAGCCTTGTGGCGGAGATCCAGAGAGAGGCGGCGGCAACATGGAACCTTACAGAG 1693  
Db 3095 CCAAGCAAGAGCCTTGTGGCGGAGATCCAGAGAGAGGCGGCGGCAACATGGAACCTTACAGAG 3154  
QY 1694 TCTACAGAGAGCCTTGAAGACCTGAAGACCGGCAAGTACGCGCAAGTGGCGCACCGCC 1753  
Db 3155 TCTACAGAGAGCCTTGAAGACCTGAAGACCGGCAAGTACGCGCAAGTGGCGCACCGCC 3214  
QY 1754 ACACCAACGAGCTGAAGCAGCTGACCGAGGCGCTGTGAGAAAGTCCGATGAGAGCATTCG 1813  
Db 3215 ACACCAACGAGCTGAAGCAGCTGACCGAGGCGCTGTGAGAAAGTCCGATGAGAGCATTCG 3274  
QY 1814 TGAATCTGGGGAAGAACCCCGCAAGTTCGCGTCCCAACCAAGAGAGACCTGGGAGAGCT 1873  
Db 3275 TGAATCTGGGGAAGAACCCCGCAAGTTCGCGTCCCAACCAAGAGAGACCTGGGAGAGCT 3334  
QY 1874 GGTGAGCGGACTTATGTCAGGCGCACTGATTCGCCGATGGAGTTGTGAAACACCCCC 1933  
Db 3335 GGTGAGCGGACTTATGTCAGGCGCACTGATTCGCCGATGGAGTTGTGAAACACCCCC 3394  
QY 1934 CCTGTGTAAGCTGTGTACCAAGCTGAGAGAGGCGCATCATCTGCGCGGAGACTTCT 1993  
Db 3395 CCTGTGTAAGCTGTGTACCAAGCTGAGAGAGGCGCATCATCTGCGCGGAGACTTCT 3454  
QY 1994 ACGTGGAGCGGCGCGCAACCGGAGAGCAAGATCGGCAAGGCGGCTGATGTCGAGC 2053  
Db 3455 ACGTGGAGCGGCGCGCAACCGGAGAGCAAGATCGGCAAGGCGGCTGATGTCGAGC 3514  
QY 2054 GGGGCGGCGAGAGATGTGAGCTTGAACCGAGACCAACCAACAGAGACCGAGCTGAGC 2113  
Db 3515 GGGGCGGCGAGAGATGTGAGCTTGAACCGAGACCAACCAACAGAGACCGAGCTGAGC 3574  
QY 2114 CCATTCAGCTTGGCCCCCTGAGAGACGCGGCGAGGAGTGAACATGTGACCGAGCCACT 2173  
Db 3575 CCATTCAGCTTGGCCCCCTGAGAGACGCGGCGAGGAGTGAACATGTGACCGAGCCACT 3634  
QY 2174 ACGGCTTGGGCGCATCATGAGGCGGAGCGGCAAGAGCTGAGAGGAGGAGCTGTGAAACGAG 2233  
Db 3635 ACGGCTTGGGCGCATCATGAGGCGGAGCGGCAAGAGCTGAGAGGAGGAGCTGTGAAACGAG 3694  
QY 2234 TCATCGAGCAGCTGATCAAGAGAGAGGTTACTTGAAGTGGGTGCTGCGCCACAGG 2293  
Db 3695 TCATCGAGCAGCTGATCAAGAGAGAGGTTACTTGAAGTGGGTGCTGCGCCACAGG 3754  
QY 2294 GCATCGGCGGCAAGAGCAGATGCAAGCTGTGTGAGCAGGAGGAGATCCGCAAGTGTCT 2353

Db 3755 GCATCGGGGCAACGAGCAGATCGCAAGCTGTTGAGCAAGGCGATCCCGAAGGTGCTGT 3814  
 QY 2354 TCCTGGAGGCTATCGATGCGGCATCGTGTATCTACAGTACATGACGACCTGTAGTGG 2413  
 Db 3815 TCCTGGAGGCTATCGATGCGGCATCGTGTATCTACAGTACATGACGACCTGTAGTGG 3874  
 QY 2414 GCAGCGGGGGCTTAGGATCGATTAAAGCTTCCCGGGGCTAGCACCGGT 2463  
 Db 3875 GCAGCGGGGGCTTAGGATCGATTAAAGCTTCCCGGGGCTAGCACCGGT 3924

RESULT 5  
 US-10-190-435-10  
 ; Sequence 10, Application US/10190435  
 ; Publication No. US20030143248A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: ZUR MEGEDE, Jan  
 ; APPLICANT: BARNETT, Susan W.  
 ; APPLICANT: LIAN, Ying  
 ; APPLICANT: ENGELBRECHT, Susan  
 ; APPLICANT: VAN RENSBURG, Estrelita J.  
 ; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C  
 ; FILE REFERENCE: PPI18133.003 / 2302-18133  
 ; CURRENT APPLICATION NUMBER: US/10/190,435  
 ; CURRENT FILING DATE: 2002-12-30  
 ; NUMBER OF SEQ ID NOS: 319  
 ; SOFTWARE: PatentIn Ver. 2.0  
 ; SEQ ID NO 10  
 ; LENGTH: 3930  
 ; TYPE: DNA  
 ; ORGANISM: Artificial Sequence  
 ; FEATURE:  
 ; OTHER INFORMATION: Description of Artificial Sequence: GagComp1PolmutAtt\_C  
 US-10-190-435-10

Query Match 96.9%; Score 2393.2; DB 12; Length 3930;  
 Best Local Similarity 99.2%; Pred. No. 0;  
 Matches 2430; Conservative 0; Mismatches 8; Indels 12; Gaps 2;

QY 14 TGGCCGAGCCATGAGCGAGCCACAGGCCAATCTGTATGAGCGCAGCACTTCA 73  
 Db 1487 TCGCCGAGCCATGAGCGAGCCACAGGCCAATCTGTATGAGCGCAGCACTTCA 1546

QY 74 AGGGCCCAAGCGCATCATCAAGTCTTCACTGCGGCAAGAGGGCCACATCGGCCCA 133  
 Db 1547 AGGGCCCAAGCGCATCATCAAGTCTTCACTGCGGCAAGAGGGCCACATCGGCCCA 1606

QY 134 ACTGCGCGCCCCCGCAAGAGGCTGTGTGAAGTGGCGCAAGAGGGGCCACAGATGA 193  
 Db 1607 ACTGCGCGCCCCCGCAAGAGGCTGTGTGAAGTGGCGCAAGAGGGGCCACAGATGA 1666

QY 194 AGGACTGACCGAGCGCAGGCCAATCTTTCGCGAGGACTGTGCGCTTCCCGAGGCA 253  
 Db 1667 AGGACTGACCGAGCGCAGGCCAATCTTTCGCGAGGACTGTGCGCTTCCCGAGGCA 1726

QY 254 AGGCCCGAGTTCCTCCAGCGAGAGAACCGGCCCAAGCCCAAGCCGCGAGCTCC 313  
 Db 1727 AGGCCCGAGTTCCTCCAGCGAGAGAACCGGCCCAAGCCGCGAGCTCC 1786

QY 314 AGGTGCGGGGGCAACACCCCGCAGCGAGCGCGCGCGCGCGCGCGCGCGCGCGCG 373  
 Db 1787 AGGTGCGGGGGCAACACCCCGCAGCGAGCGCGCGCGCGCGCGCGCGCGCGCGCG 1846

QY 374 TCCCGCAGATCACTGTGGCAGCGCCCTGTGTGAGCATCAAGTGTGGCGGCCAGATCA 433  
 Db 1847 TCCCGCAGATCACTGTGGCAGCGCCCTGTGTGAGCATCAAGTGTGGCGGCCAGATCA 1906

QY 434 AGGAGCCCTGTGACACCGCGCGCGAGCACCGTCTGTGAGAGATGAGCTGTGCCG 493  
 Db 1907 AGGAGCCCTGTGAGCTTCGCGCGCGCGAGCACCGTCTGTGAGAGATGAGCTGTGCCG 1966

QY 494 GCAAGTGAAGCCCAAGATGATCGGCGGCTTCATCAAGGTGCGCCAGTAGG 553

Db 1967 GCAAGTGAAGCCCAAGATGATCGGCGGCTTCATCAAGGTGCGCCAGTAGG 2026  
 QY 554 ACCAGATCTTGATCGAGATCTGCGGCAAGAGGCCATCGGACCCGTGTGATCGGCCCA 613  
 Db 2027 ACCAGATCTTGATCGAGATCTGCGGCAAGAGGCCATCGGACCCGTGTGATCGGCCCA 2086  
 QY 614 CCCCCTGAAATCATCATCGGCGCAACATGCTGACCCAGCTGGGCTGACCTGAACTTCC 673  
 Db 2087 CCCCCTGAAATCATCATCGGCGCAACATGCTGACCCAGCTGGGCTGACCTGAACTTCC 2146

QY 674 CCATCAGCCCCCATCGAGACCGTGCCTGAAAGCTGAAGCCCGGATGACGCCCCCAAGG 733  
 Db 2147 CCATCAGCCCCCATCGAGACCGTGCCTGAAAGCTGAAGCCCGGATGACGCCCCCAAGG 2206

QY 734 TGAAGCAGTGGCCCTTGACCGAGGAGAGATCAAGGCCCTTGACGCCCATCTGCGAGGAGA 793  
 Db 2207 TGAAGCAGTGGCCCTTGACCGAGGAGAGATCAAGGCCCTTGACGCCCATCTGCGAGGAGA 2266

QY 794 TGGAGAGGAGGGCAAGATCAACAGATCGGCCCGGAGAAACCTTACAAACCCCCCGTGT 853  
 Db 2267 TGGAGAGGAGGGCAAGATCAACAGATCGGCCCGGAGAAACCTTACAAACCCCCCGTGT 2326

QY 854 TCGCCATCAAGAAAGAGGACAGACCAAGTGGCGCAAGCTGTGACTTCCGCGAGCTGA 913  
 Db 2327 TCGCCATCAAGAAAGAGGACAGACCAAGTGGCGCAAGCTGTGACTTCCGCGAGCTGA 2386

QY 914 ACAAGCGCACCCAGGACTTCTGGAGGTGACGTGGGCATCCCCACCCCGCGCCTGA 973  
 Db 2387 ACAAGCGCACCCAGGACTTCTGGAGGTGACGTGGGCATCCCCACCCCGCGCCTGA 2446

QY 974 AGAAGAAAGAGGCTGACCGTGTGACGTGGGAGCGCCTACTTCAAGCTGCCCTGG 1033  
 Db 2447 AGAAGAAAGAGGCTGACCGTGTGACGTGGGAGCGCCTACTTCAAGCTGCCCTGG 2506

QY 1034 ACAGGAGCTTCCGCAAGTACACCGCTTCAACATCCCGAGCATCAACAGGAGCCCCCG 1093  
 Db 2507 ACAGGAGCTTCCGCAAGTACACCGCTTCAACATCCCGAGCATCAACAGGAGCCCCCG 2566

QY 1094 GCATCCGCTACCACTACAACTGTGCCCCAGGCTGGAAGGGCAGCCCCAGCATCTTCC 1153  
 Db 2567 GCATCCGCTACCACTACAACTGTGCCCCAGGCTGGAAGGGCAGCCCCAGCATCTTCC 2626

QY 1154 AGAGCAGCATCAAGATCTCTGAGCGCTTCCGGGCCCGCAACCCCGAGATCTGTATCT 1213  
 Db 2627 AGAGCAGCATCAAGATCTCTGAGCGCTTCCGGGCCCGCAACCCCGAGATCTGTATCT 2686

QY 1214 ACCAGTACATGGACGACCTGTACGTGGGCGACCGACCTGGAGATCGGCGAGCACCGCGCA 1273  
 Db 2687 ACCA-----GGCCCCCTGTACGTGGGCGAGCAGCTGGAGATCGGCGAGCACCGCGCA 2740

QY 1274 AGATCGAGGAGCTGCGCAAGCACTGTGCGCTGGGGCTTACCACCCCGCGACAGAAAGC 1333  
 Db 2741 AGATCGAGGAGCTGCGCAAGCACTGTGCGCTGGGGCTTACCACCCCGCGACAGAAAGC 2800

QY 1334 ACCAGAGGAGCCCCCTTCTCTGTGGCTGGGCTGACGAGCTGCAACCCCGAGAGTGGACCG 1393  
 Db 2801 ACCAGAGGAGCCCCCTTCTCTGTGGCTGGGCTGACGAGCTGCAACCCCGAGAGTGGACCG 2854

QY 1394 TGCAGCCCATCGAGCTGCGCGAGAGGAGAGCTGGACCGTGAAGAGCATCCAGAGGCTGG 1453  
 Db 2855 TGCAGCCCATCGAGCTGCGCGAGAGGAGAGCTGGACCGTGAAGAGCATCCAGAGGCTGG 2914

QY 1454 TGGCAAGAGTGAATCTGGGCCAGCCAGATCTACCCCGGCAATCAAGGTGCGCGAGCTGTGCA 1513  
 Db 2915 TGGCAAGAGTGAATCTGGGCCAGCCAGATCTACCCCGGCAATCAAGGTGCGCGAGCTGTGCA 2974

QY 1514 AGCTGTCTGCGGGCGCCAAAGCCCTTGACCGACATCTGTGCGCTTCAAGAGAGGCGCGAGC 1573  
 Db 2975 AGCTGTCTGCGGGCGCCAAAGCCCTTGACCGACATCTGTGCGCTTCAAGAGAGGCGCGAGC 3034

QY 1574 TGGAGCTGGCGGAGAACCGCGAGATCTGCGCGAGCCGCTGACCGGCTGTACTACGACC 1633

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Db 3035 TGGAGCTGGCCGAGAAACCGCGAGATCTTCGCGGAGCCCGCTGACGGCGTGTACTACGACC 3094
QY 1634 CCAGCAAGGACCTGGTGGCCGAGATCCAGAGCAAGGGCCACGACCACTGTGACTCCGGA 1693
Db 3095 CCAGCAAGGACCTGGTGGCCGAGATCCAGAGCAAGGGCCACGACCACTGTGACTCCGGA 3154
QY 1694 TCTACCAAGAGCCCTTCAAGAACTTGAAACCGGCAAGTACCGCAAGATGCGCACCGGCC 1753
Db 3155 TTTACCAAGAGCCCTTCAAGAACTTGAAACCGGCAAGTACCGCAAGATGCGCACCGGCC 3214
QY 1754 ACAACCAAGCACTGAAAGCACTGACCGAGGCCCTGTGCAAAAGTCCGCATGTAGAGCATCG 1813
Db 3215 ACACCAAGCACTGAAAGCACTGACCGAGGCCCTGTGCAAAAGTCCGCATGTAGAGCATCG 3274
QY 1814 TGATCTGGGGGCAAGACCCCAAGTCCGCTGCCCATCCAGAGAGAGACCTGGAGACCT 1873
Db 3275 TGATCTGGGGGCAAGACCCCAAGTCCGCTGCCCATCCAGAGAGAGACCTGGAGACCT 3334
QY 1874 GGTGACCGCACTACTGCGAGGCCACCTGGATCCCGAGTGGAGTTCGTGAACACCCGCC 1933
Db 3335 GGTGACCGCACTACTGCGAGGCCACCTGGATCCCGAGTGGAGTTCGTGAACACCCGCC 3394
QY 1934 CCTCTGTAACTGTGTGTACCACTGTGAGAGAGAGGCCATCATCTCGGCGCCGAGACCTTCT 1993
Db 3395 CCTGTGTAACTGTGTGTACCACTGTGAGAGAGAGGCCATCATCTCGGCGCCGAGACCTTCT 3454
QY 1994 ACGTGGACGGCGCCGCCCAACCGCGAGACCAAGATGGGCAAGGCCGCTACGTGACCGAC 2053
Db 3455 ACGTGGACGGCGCCGCCCAACCGCGAGACCAAGATGGGCAAGGCCGCTACGTGACCGAC 3514
QY 2054 GGGGCGCGCAGAAAGTGTGTAGCTGTGACCGAGACCAACCAAGAGACCGAGCTGACAG 2113
Db 3515 GGGGCGCGCAGAAAGTGTGTAGCTGTGACCGAGACCAACCAAGAGACCGAGCTGACAG 3574
QY 2114 CCATCTACCTGGCTCTGTGACAGGACAGCGGAGAGAGTGAACATCTGTGACCGACAC 2173
Db 3575 CCATCTACCTGGCTCTGTGACAGGACAGCGGAGAGAGTGAACATCTGTGACCGACAC 3634
QY 2174 ACGCCCTGGGCACTATCCAGGCGCCAGCCGAGCAAGAGCGAGCGAGCTGTGGAACCGA 2233
Db 3635 ACGCCCTGGGCACTATCCAGGCGCCAGCCGAGCAAGAGCGAGCGAGCTGTGGAACCGA 3694
QY 2234 TCATGACGAGCTGATCAAGAAAGAGAAAGTGTGACCTGTGAGCTGGTCCCGCCCAAG 2293
Db 3695 TCATGACGAGCTGATCAAGAAAGAGAAAGTGTGACCTGTGAGCTGGTCCCGCCCAAG 3754
QY 2294 GCATGGCGGCAACGAGAGATTCGACAGAGCTGTGAGCAAGGCACTCCGCAAGGTGCTGT 2353
Db 3755 GCATGGCGGCAACGAGAGATTCGACAGAGCTGTGAGCAAGGCACTCCGCAAGGTGCTGT 3814
QY 2354 TCTTGAGCGGATCGATGGCGGCGCATCTGATCTACAGTACATGAGACGACCTGTACGTGG 2413
Db 3815 TCTTGAGCGGATCGATGGCGGCGCATCTGATCTACAGTACATGAGACGACCTGTACGTGG 3874
QY 2414 GCAGCGGCGGCTGTGAGATCGATTAAAGCTTCCCGGGCTAGCACCGGT 2463
Db 3875 GCAGCGGCGGCTGTGAGATCGATTAAAGCTTCCCGGGCTAGCACCGGT 3924

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## RESULT 6

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US-10-190-435-11
; Sequence 11, Application US/10190435
; Publication No. US20030143248A1
; GENERAL INFORMATION:
; APPLICANT: ZUR MEGED, Jan
; APPLICANT: BARRETT, Susan W.
; APPLICANT: LIAN, Ying
; APPLICANT: ENGELBRECHT, Susan
; APPLICANT: VAN RENSBURG, Estrelita J.
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
; FILE REFERENCE: P18133.003 / 2302-18133
; CURRENT APPLICATION NUMBER: US/10/190,435

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; CURRENT FILING DATE: 2002-12-30
; NUMBER OF SEQ ID NOS: 319
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 11
; LENGTH: 3930
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: GagCmplPolmultina_C
US-10-190-435-11

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Query Match          96.3%; Score 2393.2; DB 12; Length 3930;
Best Local Similarity 99.2%; Pred. No. 0;
Matches 2430; Conservative 0; Mismatches 8; Indels 12; Gaps 2;

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QY 14 TGGCCGAGGCCATGATGACCGAGCCACAGCGCAATCTGTATGACGCGCAACTTCA 73
Db 1487 TGGCCGAGGCCATGATGACCGAGCCACAGCGCAATCTGTATGACGCGCAACTTCA 1546
QY 74 AGGGCCCCAAGCGCATCATCAAGTCTTCACTGCGGCAAGAGGGCCAGATTGCCCGCA 133
Db 1547 AGGGCCCCAAGCGCATCATCAAGTCTTCACTGCGGCAAGAGGGCCAGATTGCCCGCA 1606
QY 134 ACTGCGGCGCCCGCGCAAGAGGCTGCTGAAGTGGCGCAAGAGGGCCACAGATGA 193
Db 1607 ACTGCGGCGCCCGCGCAAGAGGCTGCTGAAGTGGCGCAAGAGGGCCACAGATGA 1666
QY 194 AGGACTGACCGAGCGCGAGGCCAACTTCTTCCGCGAGAGACCTTGCTTCCCGAGGGCA 253
Db 1667 AGGACTGACCGAGCGCGAGGCCAACTTCTTCCGCGAGAGACCTTGCTTCCCGAGGGCA 1726
QY 254 AGGGCGCGGAGTTCCCGAGCGAGCAACCGCGCAACGCGCCACACGCGCGGAGCTGC 313
Db 1727 AGGGCGCGGAGTTCCCGAGCGAGCAACCGCGCAACGCGCCACACGCGCGGAGCTGC 1786
QY 314 AGGTGCGGCGGCAACCCCGCAGCGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 373
Db 1787 AGGTGCGGCGGCAACCCCGCAGCGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 1846
QY 374 TCCCCCAGATTAACCTTGTGTGAGAGCGCCCTGTGTGAGATTAAGTGGCGCGAGATCA 433
Db 1847 TCCCCCAGATTAACCTTGTGTGAGAGCGCCCTGTGTGAGATTAAGTGGCGCGAGATCA 1906
QY 434 AGGAGGCCCTCTGTGAGACCGCGCGCGAGCAACCGTGTGAGAGATGAGCGCGCG 493
Db 1907 AGGAGGCCCTCTGTGAGACCGCGCGCGAGCAACCGTGTGAGAGATGAGCGCGCG 1966
QY 494 GCAAGTGAAGCCCAAGATGATCGCGCGCATCGCGGCTTTCATCAAGGTGCGCAAGTA 553
Db 1967 GCAAGTGAAGCCCAAGATGATCGCGCGCATCGCGGCTTTCATCAAGGTGCGCAAGTA 2026
QY 554 ACCGATTCCTGATGAGATCTGCGCGCAAGAGGCAATCGGACCGTGTATTCGCCCCCA 613
Db 2027 ACCGATTCCTGATGAGATCTGCGCGCAAGAGGCAATCGGACCGTGTATTCGCCCCCA 2086
QY 614 CCCCCGTGAACATCATCGCGCGCAACATGTGACCCGACTGCGTGCACCTTGAACCTTCC 673
Db 2087 CCCCCGTGAACATCATCGCGCGCAACATGTGACCCGACTGCGTGCACCTTGAACCTTCC 2146
QY 674 CCATCAGCCCCCATGAGACCGTGCCTGTGAAGTGAAGCCCGGCAATGGAAGGCCCAAG 733
Db 2147 CCATCAGCCCCCATGAGACCGTGCCTGTGAAGTGAAGCCCGGCAATGGAAGGCCCAAG 2206
QY 734 TGAAGAGTGGCCCCCTGACCGAGAGAGATCAAGGCGCTGACCGCCATTCGCGAGGAGA 793
Db 2207 TGAAGAGTGGCCCCCTGACCGAGAGAGATCAAGGCGCTGACCGCCATTCGCGAGGAGA 2266
QY 794 TGAAGAGAGAGGCGCAAGATCAACAGATCGCCCCCGAGAACCTTCAACAACACCCCGTGT 853
Db 2267 TGAAGAGAGAGGCGCAAGATCAACAGATCGCCCCCGAGAACCTTCAACAACACCCCGTGT 2326
QY 854 TCGGCATCAAGAAAGAGAGAGCAAGCAAGTGGCGCAAGCTGTGTGACTTCCGCGAGCTGA 913

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Db	2327	TCGCCATCAGAAGAAAGGACAGCACCAAGTGTGGCGCAAGCTGTGGACTTCCGCGAGCTGA	2338
Qy	914	ACAAAGCGCACCCAGGACTTCTGGGAGGTGCAGCTGGGCATCCCCACCCCGCGGCTCTGA	973
Db	2387	ACAAGCGCACCCAGGACTTCTGGGAGGTGCAGCTGGGCATCCCCACCCCGCGGCTCTGA	2446
Qy	974	AGAAAGAAAGAGCGTGACCGTGTGGAGCTGGGCGCAGCGCTACTTCAGCGTGTCCCTGG	1033
Db	2447	AGAAAGAAAGAGCGTGACCGTGTGGAGCTGGGCGCAGCGCTACTTCAGCGTGTCCCTGG	2506
Qy	1034	ACGAGGACTTCGCGAAGTACACCGCTTCACCATCCCGAGCATCAACAAAGAGACCCCG	1093
Db	2507	ACGAGGACTTCGCGAAGTACACCGCTTCACCATCCCGAGCATCAACAAAGAGACCCCG	2566
Qy	1094	GCATCCGCTACAGTACAACTGTGTGCCAGGGCTGGAAGGGCAGCCCCAGCATCTTCC	1153
Db	2567	GCATCCGCTACAGTACAACTGTGTGCCAGGGCTGGAAGGGCAGCCCCAGCATCTTCC	2626
Qy	1154	AGAGCAGCATGACCAAGATCTGTGAGCGCTTCCGCGCCGCAACCCCGAGATCGTGATCT	1213
Db	2627	AGAGCAGCATGACCAAGATCTGTGAGCGCTTCCGCGCCGCAACCCCGAGATCGTGATCT	2686
Qy	1214	ACCACTACATGGACGACCTGTACTGTGGGACGACCTTGGAGATCGGCGACGACCGCGCCA	1273
Db	2687	ACCA-----GGCCCCCTGTACTGTGGGACGACCTTGGAGATCGGCGACGACCGCGCCA	2740
Qy	1274	AGATCGAGGAGCTCGCAAGCACCTGTGTGGCTGGGCTTCAACCAACCCCGCAAGAAAGC	1333
Db	2741	AGATCGAGGAGCTCGCAAGCACCTGTGTGGCTGGGCTTCAACCAACCCCGCAAGAAAGC	2800
Qy	1334	ACCAAGAGGAGCCCCCTTCTGTGGATGGCTACGAGCTGCACCCCGCAAGTGGACCG	1393
Db	2801	ACCAAGAGGAGCCCCCTTCTGTGGCTGGGCTTCAACCAACCCCGCAAGTGGACCG	2854
Qy	1394	TGCAGCCCATCGAGCTGCCCGAAGAGAGAGCTGGACCGTGAAGCAGATCCAGAGCTGG	1453
Db	2855	TGCAGCCCATCGAGCTGCCCGAAGAGAGAGCTGGACCGTGAAGCAGATCCAGAGCTGG	2914
Qy	1454	TGGCAAGCTGAACTGGGCGACGACATCTACCCCGGCATCAAGTGTGCGCAGCTGTGCA	1513
Db	2915	TGGCAAGCTGAACTGGGCGACGACATCTACCCCGGCATCAAGTGTGCGCAGCTGTGCA	2974
Qy	1514	AGCTGTCTGCGGCGCCAAAGGCCCTGACCGACATCTGTGCCCTGACCGAAGAGGCGCGAGC	1573
Db	2975	AGCTGTCTGCGGCGCCAAAGGCCCTGACCGACATCTGTGCCCTGACCGAAGAGGCGCGAGC	3034
Qy	1574	TGGAGCTGCCCGAGAAACCGGAGATCTCTGCGAGCCCGTGCACGCGTGTACTACGACC	1633
Db	3035	TGGAGCTGCCCGAGAAACCGGAGATCTCTGCGAGCCCGTGCACGCGTGTACTACGACC	3094
Qy	1634	CCAGCAAGGACCTGGTGGCCGAGATCCAGAAGCAGGGCCACGACCACTGACCTACCAGA	1693
Db	3095	CCAGCAAGGACCTGGTGGCCGAGATCCAGAAGCAGGGCCACGACCACTGACCTACCAGA	3154
Qy	1694	TCTACCAAGGACCTTCAAGAACTGAAGACCGGCAAGTACGCCAAGATCGCACCCGCC	1753
Db	3155	TCTACCAAGGACCTTCAAGAACTGAAGACCGGCAAGTACGCCAAGATCGCACCCGCC	3214
Qy	1754	ACACCAACGAGTGAAGAGCTGACCGAGCCGTGCAGAAAGATGCCATGGAGAGATCG	1813
Db	3215	ACACCAACGAGTGAAGAGCTGACCGAGCCGTGCAGAAAGATGCCATGGAGAGATCG	3274
Qy	1814	TGATCTGGGGCAAGACCCCAAGTTCCGCTGCCATCCAGAGGAGACCTGGGAGACCT	1873
Db	3275	TGATCTGGGGCAAGACCCCAAGTTCCGCTGCCATCCAGAGGAGACCTGGGAGACCT	3334
Qy	1874	GGTGAACCGACTACTGGCAGGCCACCTGGATCCCGGAGTGGGAGTTTGTGAAACACCCCCC	1933
Db	3335	GGTGAACCGACTACTGGCAGGCCACCTGGATCCCGGAGTGGGAGTTTGTGAAACACCCCCC	3394
Qy	1934	CCCTGGTGAAGCTGTGTGTAACAGCTGGAGAGAGAGCCCATCATCGGCGCGAGACTTCT	1993
Db	3395	CCCTGGTGAAGCTGTGTGTAACAGCTGGAGAGAGAGCCCATCATCGGCGCGAGACTTCT	3454

## RESULT 7

US-10-190-435-58  
; Sequence 58, Application US/10190435  
; Publication No. US20030143248A1

```

/ APPLICANT: ZUR MEDEDE, Jan
/ APPLICANT: BARNETT, Susan W.
/ APPLICANT: LIAN, Ying
/ APPLICANT: ENGELBRECHT, Susan
/ APPLICANT: VAN RENSBURG, Estrelita J.
/ TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
/ TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF
/ FILE REFERENCE: EP18133.003 / 2302-18133
/ CURRENT APPLICATION NUMBER: US/10/190,435
/ CURRENT FILING DATE: 2002-12-30
/ NUMBER OF SEQ ID NOS: 319
/ SOFTWARE: PatentIn Ver. 2.0
/ SEQ ID NO 58
/ LENGTH: 5184
/ TYPE: DNA
/ ORGANISM: Artificial Sequence
/ FEATURE:
/ OTHER INFORMATION: Description of Artificial Sequence: TatRevNef
/ US-10-190-435-58

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	Query Match	96.9%;	Score 2393.2;	DB 12;	Length 5184;
	Best Local Similarity	99.2%;	Pred. No. 0;		
	Matches 2430;	Conservative	0;	Mismatches	8;
				Indels	12;
				Gaps	2;
Qy	14	TGCGCGAGGCCATGAGCCAGGCCACGAGGCCAACATCTGTATGACGCGAGCAACTTCA	73		
Db	2741	TCGCGGAGGCCATGAGCCAGGCCACGAGGCCAACATCTGTATGACGCGAGCAACTTCA	2800		
Qy	74	AGGGCCCCAAGCGCATCATCAAGTGTCTTCAACTGCGGCCAAGAGGGGCCCATATGCCCGCGCA	133		
Db	2801	AGGGCCCCAAGCGCATCATCAAGTGTCTTCAACTGCGGCCAAGAGGGGCCCATATGCCCGCGCA	2860		
Qy	134	ACTGCGCGCGCCCCCGCAAGAGGGGTGCTGGAAGTGCGGCATAGGAGGGGCCACCATGATGA	193		

Db 2861 ACTGCGGCCCCCGCAAGAAAGGCTGTGAAATGTCGGCAAGAGAGGCCACCAATGA 2920  
QY AGAAGTGCACCGAGCGCCAGGCACTTCTTCCGGAGAGACTGTGCTTCCCGAGGCA 253  
Db 194 AGAAGTGCACCGAGCGCCAGGCACTTCTTCCGGAGAGACTGTGCTTCCCGAGGCA 2980  
QY 2921 AGAAGTGCACCGAGCGCCAGGCACTTCTTCCGGAGAGACTGTGCTTCCCGAGGCA 2980  
QY 254 AGGCGCGAGGTTCCCGAGCGAGCAACCGCGCCAGCAAGCCCCACAGCGCGAGCTGC 313  
Db 2981 AGGCGCGAGGTTCCCGAGCGAGCAACCGCGCCAGCAAGCCCCACAGCGCGAGCTGC 3040  
QY 314 AGGTGCGCGGCAACAACCCCGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 373  
Db 3041 AGGTGCGCGGCAACAACCCCGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 3100  
QY 374 TCCCCAGATCACTCTGTGGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 433  
Db 3101 TCCCCAGATCACTCTGTGGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 3160  
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Db 3161 AGAGGCGCTGTGTGACACCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 3220  
QY 494 GCAAGTGAAGCCCAAGATGATGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 553  
Db 3221 GCAAGTGAAGCCCAAGATGATGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 3280  
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QY 614 CCCCCGTGAATCATCTGCG 673  
Db 3341 CCCCCGTGAATCATCTGCG 3400  
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QY 734 TGAAGCAGTGGCGCTGACCGAGAGAGATCAAGGCGCGCGCGCGCGCGCGCGCGCGCG 793  
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QY 794 TGGAGAGAGAGGCGCAAGATCACCAAGATGCGCGCGCGCGCGCGCGCGCGCGCGCG 853  
Db 3521 TGGAGAGAGAGGCGCAAGATCACCAAGATGCGCGCGCGCGCGCGCGCGCGCGCGCG 3580  
QY 854 TCGGCATCAAGAGAGAGGCGCAAGATGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 913  
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QY 974 AGAAGAGAGAGGCGCTGACCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 1033  
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QY 1094 GCATCCGCTACAGTACAAAGTGTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 1153  
Db 3821 GCATCCGCTACAGTACAAAGTGTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 3880  
QY 1154 AGAGAGAGATGACCAAGATCTTGGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 1213  
Db 3881 AGAGAGAGATGACCAAGATCTTGGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 3940  
QY 1214 ACCAGTACATGACGACCTGTAGTGGGAGGAGCCTGGAGATCGCGCGCGCGCGCGCGCA 1273  
Db 3941 ACCA-----GGCG 3994

QY 1274 AGATGAGAGAGCTGCGCAAGCACCTGTGCGCTGAGGCTTCAACACCCCGAGCAAGAGC 1333  
Db 3995 AGATGAGAGAGCTGCGCAAGCACCTGTGCGCTGAGGCTTCAACACCCCGAGCAAGAGC 4004  
QY 1334 ACCAAGAGAGGCG 1393  
Db 4055 ACCAAGAGAGGCG 4108  
QY 1394 TGCAGCCCATCGAGCTGCG 1453  
Db 4109 TGCAGCCCATCGAGCTGCG 4168  
QY 1454 TGGGCAAGCTGAATCGGCG 1513  
Db 4169 TGGGCAAGCTGAATCGGCG 4228  
QY 1514 AGCTGCTGCG 1573  
Db 4229 AGCTGCTGCG 4288  
QY 1574 TGGAGCTGGCGGAGAACCGGAGATCTGTGGCGCGCGCGCGCGCGCGCGCGCGCGCG 1633  
Db 4289 TGGAGCTGGCGGAGAACCGGAGATCTGTGGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 4348  
QY 1634 CCAAGCAAGACTTGTGCGCGGAGATCCAGAAAGCGCGCGCGCGCGCGCGCGCGCGCGCG 1693  
Db 4349 CCAAGCAAGACTTGTGCGCGGAGATCCAGAAAGCGCGCGCGCGCGCGCGCGCGCGCGCG 4408  
QY 1694 TCTACAGAGGCG 1753  
Db 4409 TCTACAGAGGCG 4468  
QY 1754 ACAACCAAGAGCTGAGACGAGTGCAGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 1813  
Db 4469 ACAACCAAGAGCTGAGACGAGTGCAGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 4478  
QY 1814 TGAATCTGGGCGCAAGCCCGCAAGTTCCGCTGCGCGCGCGCGCGCGCGCGCGCGCGCG 1873  
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QY 1874 GGTGAGACGACTTATCGGCGAGCGCACTGTGATCCCCGAGGTGTTGTTGAACACCCCG 1933  
Db 4532 GGTGAGACGACTTATCGGCGAGCGCACTGTGATCCCCGAGGTGTTGTTGAACACCCCG 4598  
QY 1934 CCTGTGTAAGCTGTGGTACAGCTGAGAGAGAGGCGCGCGCGCGCGCGCGCGCGCGCGCG 1993  
Db 4598 CCTGTGTAAGCTGTGGTACAGCTGAGAGAGAGGCGCGCGCGCGCGCGCGCGCGCGCGCG 4658  
QY 1994 ACGTGAACG 2053  
Db 4658 ACGTGAACG 4718  
QY 2054 GGGGCGCGCGAGAAATGTGAGCGTGAACCGAGACCAACCAACCAAGAGAGAGAGAGAG 2113  
Db 4718 GGGGCGCGCGAGAAATGTGAGCGTGAACCGAGAGCAACCAACCAAGAGAGAGAGAGAG 4778  
QY 2114 CCATCCAGCTGCG 2173  
Db 4778 CCATCCAGCTGCG 4838  
QY 2174 ACGCTCTGGGCTATCCAGGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 2233  
Db 4838 ACGCTCTGGGCTATCCAGGCG 4898  
QY 2234 TCAATGAGAGCTGATCAAG 2293  
Db 4898 TCAATGAGAGCTGATCAAG 4958  
QY 2294 GCATCGCGCGCGCAAG 2353  
Db 5009 GCATCGCGCGCGCAAG 5068

QY 2354 TCCTGACGGCATCGATGGCGGCATCGTGTATACAGTACATGAGCAGCACTGTACGTGG 2413  
 Db TCCTGACGGCATCGATGGCGGCATCGTGTATACAGTACATGAGCAGCACTGTACGTGG 5128  
 QY 2414 GCAGCGCGCGCTAGATCGATGATTAAGATTCCTCCGGGCTAGCACCGGT 2463  
 Db GCAGCGCGCGCTAGATCGATGATTAAGATTCCTCCGGGCTAGCACCGGT 5178

RESULT 8  
 US-10-190-435-13  
 ; Sequence 13, Application US/10190435  
 ; Publication NO. US20030143248A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: ZUR MEGERE, Jan  
 ; APPLICANT: BARNETT, Susan W.  
 ; APPLICANT: LIAN, Ying  
 ; APPLICANT: ENGELBRECHT, Susan  
 ; APPLICANT: VAN RENSBURG, Estrelita J.  
 ; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C  
 ; TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF  
 ; FILE REFERENCE: PP19133.003 / 2302-19133  
 ; CURRENT APPLICATION NUMBER: US/10/190.435  
 ; CURRENT FILING DATE: 2002-12-30  
 ; NUMBER OF SEQ ID NOS: 319  
 ; SOFTWARE: PatentIn Ver. 2.0  
 ; SEQ ID NO 13  
 ; LENGTH: 3531  
 ; TYPE: DNA  
 ; ORGANISM: Artificial Sequence  
 ; FEATURE:  
 ; OTHER INFORMATION: Description of Artificial Sequence: GagPolmut\_C  
 US-10-190-435-13

Query Match 95.7%; Score 2362.8; DB 12; Length 3531;  
 Best Local Similarity 98.4%; Pred. No. 0;  
 Matches 2411; Conservative 0; Mismatches 27; Indels 12; Gaps 2;

QY 14 TGGCGAGGCGCATGAGCAGGCGCACAGCGCCAACTCTGATGACGCGCAGCACTTCA 73  
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QY 74 AGGGCCCCAAGCGCATCATCAAGTGTCTCAACTGCGGCGAAGGAGGCGCCACATCGCCGCA 133  
 Db AGGGCCCCAAGCGCATCATCAAGTGTCTCAACTGCGGCGAAGGAGGCGCCACATCGCCGCA 1207

QY 134 ACTGCGCGCGCGCGCGCAGAGGCGTGTGAGTGTGCGCAGAGGCGCCACAGATGA 193  
 Db ACTGCGCGCGCGCGCGCAGAGGCGTGTGAGTGTGCGCAGAGGCGCCACAGATGA 1267

QY 194 AGGACTGCACCGAGCGCCAGGCGCAACTTCTTCGCGAGGACCTGGGCTTCCCGCAGGGCA 253  
 Db AGGACTGCACCGAGCGCCAGGCGCAACTTCTTCGCGAGGACCTGGGCTTCCCGCAGGGCA 1327

QY 254 AGGCGCGGAGTTCCCAAGCGAGCAAGACCGCGCCAAAGCGCCCAACAGCGCCGAGCTGC 313  
 Db AGGCGCGGAGTTCCCAAGCGAGCAAGACCGCGCCAAAGCGCCCAACAGCGCCGAGCTGC 1387

QY 314 AGGTGCGGCGCGCAACACCCCGCAGGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 373  
 Db AGGTGCGGCGCGCAACACCCCGCAGGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 1447

QY 374 TCCCGCAGATCACTCTGTGGCAGCGCCCTCTGTGAGCATCAAGGTGGCGGCGCAGATCA 433  
 Db TCCCGCAGATCACTCTGTGGCAGCGCCCTCTGTGAGCATCAAGGTGGCGGCGCAGATCA 1507

QY 434 AGGAGCGCTGTGTGACACCGCGCGCGCAGCACACCGTGTGTGAGGAGATGAGCTGTCCCG 493  
 Db AGGAGCGCTGTGTGACACCGCGCGCGCAGCACACCGTGTGTGAGGAGATGAGCTGTCCCG 1567

QY 494 GCAAGTGGAGCCCAAGATGATCGGCGCGCATCGCGCGCTTTCATCAAGGTGGCGCAGTAGC 553  
 Db GCAAGTGGAGCCCAAGATGATCGGCGCGCATCGCGCGCTTTCATCAAGGTGGCGCAGTAGC 1627

QY 554 ACCAGATCCTGATCGAGATCTCGGCAAGAGGCCATCGGCAACCGTGTGTGATCGGCCCCA 613  
 Db ACCAGATCCTGATCGAGATCTCGGCAAGAGGCCATCGGCAACCGTGTGTGATCGGCCCCA 1687

QY 614 CCCCGTGAACATCATCGCGCGCGCAACATGCTGACCCAGCTGGGCTGCACTTCCGAACTCC 673  
 Db CCCCGTGAACATCATCGCGCGCGCAACATGCTGACCCAGCTGGGCTGCACTTCCGAACTCC 1747

QY 674 CCATCAGCCCCATCGAGACCGTGCCTGGAAGTGAAGCCCGGCGATGACGCGCCCCAAGG 733  
 Db CCATCAGCCCCATCGAGACCGTGCCTGGAAGTGAAGCCCGGCGATGACGCGCCCCAAGG 1807

QY 734 TGAAGCAGTGGCCCTGACCGAGGAGAGATCAAGGCCCTGACCCGCACTCTCGGAGGAGA 793  
 Db TGAAGCAGTGGCCCTGACCGAGGAGAGATCAAGGCCCTGACCCGCACTCTCGGAGGAGA 1867

QY 794 TGGAGAAGGAGGCAAGATCAACAGATCGGCCCGGAGAACCCCTTACAAACACCCCGTGT 853  
 Db TGGAGAAGGAGGCAAGATCAACAGATCGGCCCGGAGAACCCCTTACAAACACCCCGTGT 1927

QY 854 TCGCCATCAAGAAAGAGACAGCAGCAGCAGTGGCGCAAGCTGTGAGCTTCCGCGAGCTGA 913  
 Db TCGCCATCAAGAAAGAGAGCAGCAGCAGTGGCGCAAGCTGTGAGCTTCCGCGAGCTGA 1987

QY 914 ACAAGCGCACCCAGGACTTCTGGGAGGTGACGCTGGGATCCCCCAGCCCGCGGCTGA 973  
 Db ACAAGCGCACCCAGGACTTCTGGGAGGTGACGCTGGGATCCCCCAGCCCGCGGCTGA 2047

QY 974 AGAAGAAGAGAGCGTGCCTGTGGACGTGGCGCAGCGCTTCTACAGCTGCCCCCTGG 1033  
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QY 1034 ACGAGACTTTCGGCAAGTACACCGCTTCAACATCCCGAGATCAACACGAGAGACCCCG 1093  
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QY 1154 AGAGCAGCATGACCAAGATCTCTGGAGCCCTTCCGCGCCCGCAACCCCGAGATCTGATCT 1213  
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QY 1214 ACCAGTACATGAGCAGCCTGTGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 1273  
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QY 1274 AGATCGAGGAGTGGCGCAAGCACCTGTGCTGGGCTTCAACACCCCGCAGCAAGAAAGC 1333  
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QY 1334 ACCAAGAGGAGGCGCCCTTCTGTGGATGGGCTACGAGTGCACCCCGCAAGTGAAGC 1393  
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QY 1394 TGCAGCCCATCGAGCTGCGCGAGGAGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 1453  
 Db TGCAGCCCATCGAGCTGCGCGAGGAGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 2515

QY 1454 TGGCAAGCTGAACCTGGGCGCAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 1513  
 Db TGGCAAGCTGAACCTGGGCGCAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 2575

QY 1514 AGCTGCTCGCGGCGCCAAAGCCCTTGACCGACATGCTGCCCTGACCGAGGAGGCGGAGC 1573  
 Db AGCTGCTCGCGGCGCCAAAGCCCTTGACCGACATGCTGCCCTGACCGAGGAGGCGGAGC 2635

QY 1574 TGGAGCTGGCGAGAACCGCGAGATCTTGGCGGAGCCCGTGCACGGCGTGTACTAGGACC 1633  
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QY 1634 CCAGCAAGACCTGCTGCGCGAGATCCAGAACGAGGCGCCAGCAAGTGAGACTTACCGA 1693
DB 2696 CCAGCAAGACCTGCTGCGCGAGATCCAGAACGAGGCGCCAGCAAGTGAGACTTACCGA 2755
QY 1694 TCTACCAAGAGCCCTTCAAGAACCTTGAGAACCGGCAAGTACCGCAAGTGGCCACCGCC 1753
DB 2756 TCTACCAAGAGCCCTTCAAGAACCTTGAGAACCGGCAAGTACCGCAAGTGGCCACCGCC 2815
QY 1754 ACACCAAGACGCTGTAAGAGCTGACCGGAGCGCTGCAAGAAAGTCCCATGAGAGCATCG 1813
DB 2816 ACACCAAGACGCTGTAAGAGCTGACCGGAGCGCTGCAAGAAAGTCCCATGAGAGCATCG 2875
QY 1814 TGATCTGGGCGAAGACCCCAAGTTCCTGCTCCCATCTCAAGAGAGACTTGGAGACTT 1873
DB 2876 TGATCTGGGCGAAGACCCCAAGTTCCTGCTCCCATCTCAAGAGAGACTTGGAGAGACTT 2935
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DB 2936 GGTGACCGGACTACTGAGAGGCGCACTGAGATCCCGAGATGGGAGATTTGCTGAAACACCCGCC 2995
QY 1934 CCCTGCTGAAGCTGTGTACAGCTGAGAGAGAGCCCATCATCGGCGCCGAGACCTTCT 1993
DB 2996 CCCTGCTGAAGCTGTGTGTACAGCTGAGAGAGAGCCCATCATCGGCGCCGAGACCTTCT 3055
QY 1994 AGGTGACGCGCGCGCCCAACCGCGAGACCAAGATCGCAAGGCGGCTTACGTGACCGAGC 2053
DB 3056 AGGTGACGCGCGCGCCCAACCGCGAGACCAAGATCGCAAGGCGGCTTACGTGACCGAGC 3115
QY 2054 GGGGCGCGCAGAAAGTCTGTAGGCTGACCGAGACCAAGATCGCAAGGCGGCTTACGTGACCGAGC 2113
DB 3116 GGGGCGCGCAGAAAGTCTGTAGGCTGACCGAGACCAAGATCGCAAGGCGGCTTACGTGACCGAGC 3175
QY 2114 CCATTCAGCTGCGCTGTGAGAGCAAGCGGAGGAGTGAATCTGTGACCGAGACCGAGC 2173
DB 3176 CCATTCAGCTGCGCTGTGAGAGCAAGCGGAGGAGTGAATCTGTGACCGAGACCGAGC 3235
QY 2174 ACGGCTTGGGCTCATTCAGGCGCCAGCGCCGAGAGGAGGAGCGAGCTGTGAAACCGAGA 2233
DB 3236 ACGGCTTGGGCTCATTCAGGCGCCAGCGCCGAGAGGAGGAGCGAGCTGTGAAACCGAGA 3295
QY 2234 TCATGAGACGAGCTGATCAAGAGAGGAGAGTGTACTGTAGCTGGGCTGCGCGCCGAGAGC 2293
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QY 2294 GCATCGCGCGGACAGCAGAGATCGAACAGCTGTGTAGAGAGGAGCATTCGCAAGGTGCTGT 2353
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QY 2354 TCCTGAGAGGAGTCAATGCGCGGCTGCTGATCTTACCAATGACATGAGACGACTGTACGTGG 2413
DB 3416 TCCTGAGAGGAGTCAATGCGCGGCTGCTGATCTTACCAATGACATGAGACGACTGTACGTGG 3475
QY 2414 GCAGGCGGCGGCGCTGTGATCGATTAAAGCTTCCCGGAGCTAGACCGCGGT 2463
DB 3476 GCAGGCGGCGGCGCTGTGATCGATTAAAGCTTCCCGGAGCTAGACCGCGGT 3525

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## RESULT 9

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US-10-435-14
: Sequence 14, Application US/10190435
: Publication No. US20030143248A1
: GENERAL INFORMATION:
: APPLICANT: ZUR MEGEDE, Jan
: APPLICANT: BARNETT, Susan W.
: APPLICANT: LIAN, Ying
: APPLICANT: ENGELBRECHT, Susan
: APPLICANT: VAN RENSBURG, Estrelita J.
: TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
: TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES, AND USES THEREOF
: FILE REFERENCE: P1813.003 / 2302-18133
: CURRENT APPLICATION NUMBER: US/10/190,435
: FILING DATE: 2002-12-30
: NUMBER OF SEQ ID NOS: 319

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: SOFTWARE: PatentIn Ver. 2.0
: SEQ ID NO 14
: LENGTH: 3537
: TYPE: DNA
: ORGANISM: Artificial Sequence
: FEATURE:
: OTHER INFORMATION: Description of Artificial Sequence: GagPolmutate_C
US-10-435-14

Query March 95.6%; Score 2361.2; DB 12; Length 3537;
Best Local Similarity 98.4%; Pred. No. 0;
Matches 2410; Conservative 0; Mismatches 28; Indels 12; Gaps 2;

QY 14 TGGCCGAGGCGCATAGGCGAGGCGACACGAGCGCAACTCTGATGACGCGAGCACTTCA 73
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DB 1154 AGGCGCCCAAGCGCATCATCAAGTGTCTTCACTGCGGCAAGAGGCGCCACATCGCCGCA 1213
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QY 254 AGGCGCGCGAGTTCCTCCAGAGAGGAGCAACCGCGCAACAGCCCAAGCCGAGACTGC 313
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DB 1394 AGGTGCGCGGAGCAACCCCGAGCGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 1453
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QY 494 GCAAGTGAAGCCCAAGATGATGCGCGCGCATCGCGGCTTCATCAAGTGGCGCGAGTACG 553
DB 1574 GCAAGTGAAGCCCAAGATGATGCGCGCGCATCGCGGCTTCATCAAGTGGCGCGAGTACG 1633
QY 554 ACCAGATCTGATGATGATGATGCGGCAAGAGGCGCATCGGCAACCGTGTGATGCGCCCA 613
DB 1634 ACCAGATCTGATGATGATGATGCGGCAAGAGGCGCATCGGCAACCGTGTGATGCGCCCA 1693
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DB 1814 TGAAGCAGTGGCGCTTGAACCGAGAGAAATCAAGGCGCTTGAACCGGCAATCTTGAAGAGA 1873
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QY 914 ACAAGCGACCCAGGACTTCTGGAGGTGACGTGGGCATCCCCACCCCGCGGCTTGA 973  
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 Db  
 QY 974 AGAAGAAGAGCGGTGACCGTCTGGAGGTGACGTGGGCATCCCCACCCCGCGGCTTGA 1033  
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 QY 2054 AGAAGAAGAGCGGTGACCGTCTGGAGGTGACGTGGGCATCCCCACCCCGCGGCTTGA 2113  
 QY 1034 ACGAGGACTTCCGCAAGTACACCGCTTCCACCATCCCGAGCATCAACACGAGACCCCG 1093  
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 QY 2114 ACGAGGACTTCCGCAAGTACACCGCTTCCACCATCCCGAGCATCAACACGAGACCCCG 2173  
 QY 1094 GCATCGCTACCAAGTACACCGCTTCCACCATCCCGAGCATCAACACGAGACCCCG 1153  
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 QY 2174 GCATCGCTACCAAGTACACCGCTTCCACCATCCCGAGCATCAACACGAGACCCCG 2233  
 QY 1154 AGAGCAGCATGACCAAGTACACCGCTTCCACCATCCCGAGCATCAACACGAGACCCCG 1213  
 Db  
 QY 2234 AGAGCAGCATGACCAAGTACACCGCTTCCACCATCCCGAGCATCAACACGAGACCCCG 2293  
 QY 1214 ACCAGTACATGACGACCTGACGTGGGAGCATGAGATCGGCAGACCCCGCA 1273  
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 QY 2294 ACCA-----GGCCCCCTTGTAGTGGGAGCATGAGATCGGCAGACCCCGCA 2347  
 QY 1274 AGATCGAGGAGTGGGCAAGCACTTCTGGGCTTCCACCATCCCGAGCATCAACACGAGACCCCG 1333  
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 QY 2348 AGATCGAGGAGTGGGCAAGCACTTCTGGGCTTCCACCATCCCGAGCATCAACACGAGACCCCG 2407  
 QY 1334 ACCAGAAGAGCCCGCTTCTGTGGATGGGTACGAGTGCACCCCGCAAGTGGACCG 1393  
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 QY 2408 ACCAGAAGAGCCCGCTTCTGTGGATGGGTACGAGTGCACCCCGCAAGTGGACCG 2461  
 QY 1394 TCGACCCATCGAGTGGGCAAGCACTTCTGGGCTTCCACCATCCCGAGCATCAACACGAGACCCCG 1453  
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 QY 2582 AGCTGTGGCGGCGCAAGGCGCTTGAACGATCGTGGGCTTCCACCATCCCGAGCATCAACACGAGACCCCG 2641  
 QY 1574 TGGAGTGGCGGCGCAAGGCGCTTGAACGATCGTGGGCTTCCACCATCCCGAGCATCAACACGAGACCCCG 1633  
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 QY 2642 TGGAGTGGCGGCGCAAGGCGCTTGAACGATCGTGGGCTTCCACCATCCCGAGCATCAACACGAGACCCCG 2701  
 QY 1634 CCAGCAAGGACCTGTGGGCGGAGATCCAGAGCAGGCGGCGCAAGTGGACCTACCGA 1693  
 Db  
 QY 2702 CCAGCAAGGACCTGTGGGCGGAGATCCAGAGCAGGCGGCGCAAGTGGACCTACCGA 2761  
 QY 1694 TCTACAGAGGCGCTTGAAGACCTGAAGCGGCGGAGTACGCGGAGTGGGAGCGGCGG 1753  
 Db  
 QY 2762 TCTACAGAGGCGCTTGAAGACCTGAAGCGGCGGAGTACGCGGAGTGGGAGCGGCGG 2821  
 QY 1754 ACACCAAGGAGTGAAGGAGTGAAGCGGCGGAGTGAAGGAGTGGGAGCGGCGG 1813  
 Db  
 QY 2822 ACACCAAGGAGTGAAGGAGTGAAGCGGCGGAGTGAAGGAGTGGGAGCGGCGG 2881  
 QY 1814 TGATCTGGGCGGAGACCCCGGAGTGGGAGTGGGAGTGGGAGCGGCGG 1873  
 Db  
 QY 2882 TGATCTGGGCGGAGACCCCGGAGTGGGAGTGGGAGTGGGAGCGGCGG 2941  
 QY 1874 GTTGAACCGACTACTGGCAGGCGGAGTGGGAGTGGGAGTGGGAGCGGCGG 1933  
 Db  
 QY 2942 GTTGAACCGACTACTGGCAGGCGGAGTGGGAGTGGGAGTGGGAGCGGCGG 3001  
 QY 1934 CCTGTGTAGTGTGGTACGAGTGGGAGGAGCGGAGTGGGAGTGGGAGCGGCGG 1993  
 Db  
 QY 3002 CCTGTGTAGTGTGGTACGAGTGGGAGGAGCGGAGTGGGAGTGGGAGCGGCGG 3061  
 QY 1994 ACGTGGAGCGGCGGCGGAGTGGGAGGAGCGGAGTGGGAGTGGGAGCGGCGG 2053

Db 3062 ACGTGGAGCGGCGGCGGAGTGGGAGGAGCGGAGTGGGAGTGGGAGCGGCGG 3121  
 QY 2054 GGGGCGGCGGAGAGTCTGTAGCTTGAACGAGACCAACAGAGGAGCGGAGTGGAGG 2113  
 Db  
 QY 3122 GGGGCGGCGGAGAGTCTGTAGCTTGAACGAGACCAACAGAGGAGCGGAGTGGAGG 3181  
 QY 2114 CCATCCAGTGGCGCTTGGAGGAGCGGAGGAGTGAACATCTGTAGCGGAGCGAGT 2173  
 Db  
 QY 3182 CCATCCAGTGGCGCTTGGAGGAGCGGAGGAGTGAACATCTGTAGCGGAGCGAGT 3241  
 QY 2174 ACGCGCTGGGCGATCATCCAGGCGGCGGAGGAGGAGTGGTGAACAGGAGTGGTGA 2233  
 Db  
 QY 3242 ACGCGCTGGGCGATCATCCAGGCGGCGGAGGAGGAGTGGTGAACAGGAGTGGTGA 3301  
 QY 2234 TCATCGAGCAGTGTATCAAGAGGAGGAGTGTACTAGCTGGTGGTGGCGGCGGAGG 2293  
 Db  
 QY 3302 TCATCGAGCAGTGTATCAAGAGGAGGAGTGTACTAGCTGGTGGTGGCGGCGGAGG 3361  
 QY 2294 GCATCGGCGGCAACGAGCAGATCGAAGCTGGTGAAGGAGGAGTGGCGGAGTGGTGT 2353  
 Db  
 QY 3362 GCATCGGCGGCAACGAGCAGATCGAAGCTGGTGAAGGAGGAGTGGCGGAGTGGTGT 3421  
 QY 2354 TCCTGGAGCGGATCGATCGGCGGATCGTGTACTTACAGTACATGAGCAGCTGTAGCTGG 2413  
 Db  
 QY 3422 TCCTGGAGCGGATCGATCGGCGGATCGTGTACTTACAGTACATGAGCAGCTGTAGCTGG 3481  
 QY 2414 GCAGCGGCGGCTTAGTATCGATTAAGCTTCCCGGGCTAGCAGCGGT 2463  
 Db  
 QY 3482 GCAGCGGCGGCTTAGTATCGATTAAGCTTCCCGGGCTAGCAGCGGT 3531

RESULT 10

US-10-190-435-15  
 ; Sequence 15, Application US/10190435  
 ; Publication No. US20030143248A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: ZUR MEGEDE, Jan  
 ; APPLICANT: EARNETT, Susan W.  
 ; APPLICANT: LIAN, Ying  
 ; APPLICANT: ENGELBRECHT, Susan  
 ; APPLICANT: VAN RENSBURG, Estrelita J.  
 ; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C  
 ; FILE REFERENCE: PP18133.003 / 2302-18133  
 ; CURRENT APPLICATION NUMBER: US/10/190,435  
 ; CURRENT FILING DATE: 2002-12-30  
 ; NUMBER OF SEQ ID NOS: 319  
 ; SOFTWARE: PatentIn Ver. 2.0  
 ; SEQ ID NO 15  
 ; LENGTH: 3537  
 ; TYPE: DNA  
 ; ORGANISM: Artificial Sequence  
 ; FEATURE:  
 ; OTHER INFORMATION: Description of Artificial Sequence: GagPolmutina\_C  
 US-10-190-435-15

Query Match 95.6%; Score 2361.2; DB 12; Length 3537;  
 Best Local Similarity 98.4%; Pred. No. 0;  
 Matches 2410; Conservative 0; Mismatches 28; Indels 12; Gaps 2;

QY 14 TGGCGGAGCGCATGAGCCAGGCGGCGGAGGAGTGGTGAACATCTGTAGCGGAGCACTTCA 73  
 Db 1094 TGGCGGAGCGCATGAGCCAGGCGGCGGAGGAGTGGTGAACATCTGTAGCGGAGCACTTCA 1153  
 QY 74 AGGGCCCCAAGCGCATCATCAAGTCTTCAACTGGGCAAGAGGCGGCGGAGTGGGCGGCA 133  
 Db 1154 AGGGCCCCAAGCGCATCATCAAGTCTTCAACTGGGCAAGAGGCGGCGGAGTGGGCGGCA 1213  
 QY 134 ACTGCGGCGGCGGCGGAGGAGTGGTGAAGTGGGAGGAGGCGGCGGAGTGGGCGGAGTGA 193  
 Db 1214 ACTGCGGCGGCGGCGGAGGAGTGGTGAAGTGGGAGGAGGCGGCGGAGTGGGCGGAGTGA 1273

QY	194	AGGACTGACCGAGCGCGCAGGCGCACTTCTTCGCGGAGCACTGGCTTCTCCCGAGG6CA	253
Db	1274	AGGACTGACCGAGCGCGCAGGCGCACTTCTTCGCGGAGCACTGGCTTCTCCCGAGG6CA	1333
QY	254	AGGCGCGGAGTTTCCCGAGGAGGAGAACCGGCGCAAGCCCCACAGCGCGGAGCTGCG	313
Db	1334	AGGCGCGGAGTTTCCCGAGGAGGAGAACCGGCGCAAGCCCCACAGCGCGGAGCTGCG	1393
QY	314	AGGTGCGCGGAGCAACACCCCGCAGCGAGGCGGCGCGAGCGCAAGG6CACTCTGAAT	373
Db	1394	AGGTGCGCGGAGCAACACCCCGCAGCGAGGCGGCGCGAGCGCAAGG6CACTCTGAAT	1453
QY	374	TCCCCCGAGTACCTCTGTGGCAGGCGCCCTCTGTGAGCACTCAAGTGGGCGGCGAGTCA	433
Db	1454	TCCCCCGAGTACCTCTGTGGCAGGCGCCCTCTGTGAGCACTCAAGTGGGCGGCGAGTCA	1513
QY	434	AGGAGCGCTTGTGGAGACACCGGCGCGCAGCACTCGTGTGAGAGATAGCTTGGCCG	493
Db	1514	AGGAGCGCTTGTGGAGACACCGGCGCGCAGCACTCGTGTGAGAGATAGCTTGGCCG	1573
QY	494	GCAA GTGAAAGCCCAATGATCGGCGGCATCGCGGCTTCATTAAGTGGCGCGAGTACG	553
Db	1574	GCAA GTGAAAGCCCAATGATCGGCGGCATCGCGGCTTCATTAAGTGGCGCGAGTACG	1633
QY	554	ACGAGTCCGTATCGAGATCTGCGGCAAGAGGCGCATCGGCACTGCTGATCGGCCCA	613
Db	1634	ACGAGTCCGTATCGAGATCTGCGGCAAGAGGCGCATCGGCACTGCTGATCGGCCCA	1693
QY	614	CCCCCGTGAACATCATCGGCGGCAACATGCTGACCCAGCTGGGCTGCACTCTGAATTC	673
Db	1694	CCCCCGTGAACATCATCGGCGGCAACATGCTGACCCAGCTGGGCTGCACTCTGAATTC	1753
QY	674	CCATCAGCCCATGAGACCGGTGCCCGTGAAGCTGAAGCCCGGATAGAGCGGCCCAAG	733
Db	1754	CCATCAGCCCATGAGACCGGTGCCCGTGAAGCTGAAGCCCGGATAGAGCGGCCCAAG	1813
QY	734	TGAAGCACTGCGCCCTTGACCGAGGAGAAAGATCAAGGCGCTTGACCGGCATCTGCAGAGAG	793
Db	1814	TGAAGCACTGCGCCCTTGACCGAGGAGAAAGATCAAGGCGCTTGACCGGCATCTGCAGAGAG	1873
QY	794	TGGAGAAAGGAGGCAAGTCAACAAATCGGCCCGGAGAACCCCTTAACAACCCCGCTGT	853
Db	1874	TGGAGAAAGGAGGCAAGTCAACAAATCGGCCCGGAGAACCCCTTAACAACCCCGCTGT	1933
QY	854	TGCGCATCAAGAAAGAGACAGCAACCAAGTGGCGCAAGCTGGTGAATCTCCGAGAGTGA	913
Db	1934	TGCGCATCAAGAAAGAGAGACAGCAACCAAGTGGCGCAAGCTGGTGAATCTCCGAGAGTGA	1993
QY	914	ACAAAGCGCACCAAGACTTCTGGGAGGTGCAAGCTGGGGTATCCCCACCCGCGGCTTGA	973
Db	1994	ACAAAGCGCACCAAGACTTCTGGGAGGTGCAAGCTGGGGTATCCCCACCCGCGGCTTGA	2053
QY	974	AGAGAAAGAAAGGAGGTGACCGTGTCTGACGTGGGCGAGCGCTTAATTGACGCTGGCCCTGG	1033
Db	2054	AGAGAAAGAAAGGAGGTGACCGTGTCTGACGTGGGCGAGCGCTTAATTGACGCTGGCCCTGG	2113
QY	1034	ACGAGGACTTCGCAAGTACACCGCTTCAACCATCCCGAGTACAACAGAGACCCCG	1093
Db	2114	ACGAGGACTTCGCAAGTACACCGCTTCAACCATCCCGAGTACAACAGAGACCCCG	2173
QY	1094	GCAATCCGATCAAGAACAAAGTGCCTGCGCCGAGGGGTGGAAGGAGCGCCCGAGACTCTTC	1153
Db	2174	GCAATCCGATCAAGAACAAAGTGCCTGCGCCGAGGGGTGGAAGGAGCGCCCGAGACTCTTC	2233
QY	1154	AGAGCAGCATGACCAAGATCTGTGAGCCCTTTCGCGCCCGCAACCCCGAGTCTGTATCT	1213
Db	2234	AGAGCAGCATGACCAAGATCTGTGAGCCCTTTCGCGCCCGCAACCCCGAGTCTGTATCT	2293
QY	1214	ACCGAGTACATGAGACGACTGTACGTGGGCAAGCACTGGAGATGAGGCGAGACCGGCGCA	1273
Db	2294	ACCGAGTACATGAGACGACTGTACGTGGGCAAGCACTGGAGATGAGGCGAGACCGGCGCA	2347
QY	1274	AGATCGAGAGCTGCGCAAGCACTGTGCGCTGCGGCTTCAACAACCCCGACAAGAGC	1333

Db	2348	AGATTCGAGAGCTGCGCAACACTGTGCGTGGGCTTCAACAACCCCGAAGAAGC	2407
QY	1334	ACGAGAGAGAGCCCTTCTCTGTGATGAGCTACAGAGCTGACCCCGACAAATGACG	1393
Db	2408	ACCGAAGAGAGCCCTTCTCTGTGCAAT-----CGAGCTGACCCCGAAGGTGACG	2461
QY	1394	TGCAGGCCCATCGAGTCTCCCGAAGAAGAGAGCTGACCCGTGAACGACATCCAGAAGCTGG	1453
Db	2462	TGCAGGCCCATCGAGTCTCCCGAAGAAGAGAGCTGGAACCGGAACGACATCCAGAAGCTGG	2521
QY	1454	TGGCAAGAGCTGAATGAGGCGAGCCAGATCTACCCCGGCTACCAAGTCCGACAGCTGAC	1513
Db	2522	TGGCAAGAGCTGAATGAGGCGAGCCAGATCTACCCCGGCTACCAAGTCCGACAGCTGAC	2581
QY	1514	AGCTGCTCGGCGGCGCAAGGACCTTGACCGACATCGTGCCTTGACCCGAGAGGCGAGC	1573
Db	2582	AGCTGCTCGGCGGCGCAAGGACCTTGACCGACATCGTGCCTTGACCCGAGAGGCGAGC	2641
QY	1574	TGGAGCTGGCGGAGAACCGGAGATCCGTGGCGAGCCCGTGAACCGGCTGTACTAGAAC	1633
Db	2642	TGGAGCTGGCGGAGAACCGGAGATCCGTGGCGAGCCCGTGAACCGGCTGTACTAGAAC	2701
QY	1634	CCAGCAAGAGACTGTGTGGCGGAGATCCAGAGCGAGGCGACGACCACTGGACCTACAGA	1693
Db	2702	CCAGCAAGAGACTGTGTGGCGGAGATCCAGAGCGAGGCGACGACCACTGGACCTACAGA	2761
QY	1694	TCTACCCAGAGAGCCCTTGAAGACCTGGAAGACCGGCAAGTACGCAAGATCGACACGCGCC	1753
Db	2762	TCTACCCAGAGAGCCCTTGAAGACCTGGAAGACCGGCAAGTACGCAAGATCGACACGCGCC	2821
QY	1754	ACACCAACGACGTGAACAGCTGACCGAGGACCGGTGCAGAAATATGCATGAGAGGACATCG	1813
Db	2822	ACACCAACGACGTGAACAGCTGACCGAGGACCGGTGCAGAAATATGCATGAGAGGACATCG	2881
QY	1814	TGATCTGGGGCAAGACCCCCCAAGTTCGCGCTGCCCATCTCAGAAAGAACCTGGGAGACT	1873
Db	2882	TGATCTGGGGCAAGACCCCCCAAGTTCGCGCTGCCCATCTCAGAAAGAACCTGGGAGACT	2941
QY	1874	GGTGAGACGGAATATGAGAGGCGACCTGAGATCCCGAGTGGGAATGTGTGAACACCCCGC	1933
Db	2942	GGTGAGACGGAATATGAGAGGCGACCTGAGATCCCGAGTGGGAATGTGTGAACACCCCGC	3001
QY	1934	CCCTGTGAGAGCTGTGTGACCAAGCTGAGAAAGAGCCCATATCATGTGGCGCCGAGACCTTCT	1993
Db	3002	CCCTGTGAGAGCTGTGTGACCAAGCTGAGAAAGAGCCCATATCATGTGGCGCCGAGACCTTCT	3061
QY	1994	ACGTGAGACGGGCGCGCCCAACCGCGAGACCAAGATATCGGCAAGGCGCGCTACGTGACCGAC	2053
Db	3062	ACGTGAGACGGGCGCGCCCAACCGCGAGACCAAGATATCGGCAAGGCGCGCTACGTGACCGAC	3121
QY	2054	GGGGCGGCGAGAGATCGTGAAGCTGACCGAGACCAACCAACCAAGAACCGAGCTGACG	2113
Db	3122	GGGGCGGCGAGAGATCGTGAAGCTGACCGAGACCAACCAACCAAGAACCGAGCTGACG	3181
QY	2114	CCATTCAGAGTGGCCCTGAGAGACGCGCGAGCGAGGTGAACATGTGTACCGACAGCAAT	2173
Db	3182	CCATTCAGAGTGGCCCTGAGAGACGCGCGAGCGAGGTGAACATGTGTACCGACAGCAAT	3241
QY	2174	ACGCGCTGGGATGATCCAGGCGCCAGCCGACCAAGACGAGCGAGAGCAATGTGTGAACAGA	2233
Db	3242	ACGCGCTGGGATGATCCAGGCGCCAGCCGACCAAGACGAGCGAGAGCAATGTGTGAACAGA	3301
QY	2234	TCATTCGAGACTGTATCAAGAGAGAAAGGTGTACGTGAGTGGGTCCCGGCCCAAGG	2293
Db	3302	TCATTCGAGACTGTATCAAGAGAGAAAGGTGTACGTGAGTGGGTCCCGGCCCAAGG	3361
QY	2294	GCATGCGGCGAACACGAGAGATCCAGCAAGCTGTGAGCAAGGGGATCCGCAAGGTGCTGT	2353
Db	3362	GCATGCGGCGAACACGAGAGATCCAGCAAGCTGTGAGCAAGGGGATCCGCAAGGTGCTGT	3421
QY	2354	TCCTGAGCGCATGATGGCGGCAATCGTGTCTTACCAATATGAGAGCACTGTACGTGG	2413



Db 3422 TCCTGGACGGCATCGATGCGGCATCGTGTATCTACCACTACATGACGACCTGTACGTGG 3481

Qy 2414 GCAGCGGGCCCTAGGATCGATTAAAGCTTCCCGGGCTAGCACCGGT 2463

Db 3482 GCAGCGGGCCCTAGGATCGATTAAAGCTTCCCGGGCTAGCACCGGT 3531

RESULT 11

US-10-190-435-12

; Sequence 12, Application US/10190435

; Publication No. US20030143248A1

; GENERAL INFORMATION:

; APPLICANT: ZUR MEDEDE, Jan

; APPLICANT: BARNETT, Susan W.

; APPLICANT: LIAN, Ying

; APPLICANT: ENGELBRECHT, Susan

; APPLICANT: VAN RENSBURG, Estrelita J.

; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C

; FILE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF

; FILE REFERENCE: PPI8133.003 / 2302-18133

; CURRENT APPLICATION NUMBER: US/10/190,435

; CURRENT FILING DATE: 2002-12-30

; NUMBER OF SEQ ID NOS: 319

; SOFTWARE: PatentIn Ver. 2.0

; SEQ ID NO 12

; LENGTH: 5145

; TYPE: DNA

; ORGANISM: Artificial Sequence

; FEATURE:

; OTHER INFORMATION: Description of Artificial Sequence:

; OTHER INFORMATION: GagCompPolmutInaTatRevNef\_C

US-10-190-435-12

Query Match 95.6%; Score 2360.2; DB 12; Length 5145;

Best Local Similarity 99.2%; Pred. No. 0;

Matches 2397; Conservative 0; Mismatches 8; Indels 12; Gaps 2;

Qy 14 TGGCGAGGCCATGATGCCAGGCCACCGAGGCCAAATCCTCTGATGAGCGCAGCACTTCA 73

Db 1487 TCGCCGAGGCCATGATGCCAGGCCACCGAGGCCAAATCCTCTGATGAGCGCAGCACTTCA 1546

Qy 74 AGGGCCCCAAGCGCATATCAAGTGTCTCAATGGGGCAAGAGGGCCACATCGCCCGCA 133

Db 1547 AGGGCCCCAAGCGCATATCAAGTGTCTCAATGGGGCAAGAGGGCCACATCGCCCGCA 1606

Qy 134 ACTGGCGGCCCCCGCAGAGAGGCTGTGAGTGTGGCGAGAGGGCCACAGATGA 193

Db 1607 ACTGGCGGCCCCCGCAGAGAGGCTGTGAGTGTGGCGAGAGGGCCACAGATGA 1666

Qy 194 AGGACTGCACCGAGGCCACCGCCAACTTCTTCGGCGAGGACCTGGCTTCCCGCCAGGGCA 253

Db 1667 AGGACTGCACCGAGGCCACCGCCAACTTCTTCGGCGAGGACCTGGCTTCCCGCCAGGGCA 1726

Qy 254 AGGCCCGGAGTTCCCGAGCGAGAGAACCGCGCCAAAGCCCGCCAGCCGCGAGCTGC 313

Db 1727 AGGCCCGGAGTTCCCGAGCGAGAGAACCGCGCCAAAGCCCGCCAGCCGCGAGCTGC 1786

Qy 314 AGGTGGCGGCGACACACCCCGAGCGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 373

Db 1787 AGGTGGCGGCGACACACCCCGAGCGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 1846

Qy 374 TCCCCCAGATCACCTGTGGCGAGCGCCCTCTGGTGAGCATCAAGGTGGCGGCGCAGATCA 433

Db 1847 TCCCCCAGATCACCTGTGGCGAGCGCCCTCTGGTGAGCATCAAGGTGGCGGCGCAGATCA 1906

Qy 434 AGGAGCCCTGTGGACACCGCGCGCGCGAGACACCGTGTCTGGAGGAGATGAGCTTGC 493

Db 1907 AGGAGCCCTGTGGACACCGCGCGCGCGAGACACCGTGTCTGGAGGAGATGAGCTTGC 1966

Qy 494 GCAAGTGGAGGCCCAAGATGATCGGGCGGATCGGGCGGCTTCAATCAAGGTGGCGAGTAG 553

Db 1967 GCAAGTGGAGGCCCAAGATGATCGGGCGGATCGGGCGGCTTCAATCAAGGTGGCGAGTAG 2026

Qy 554 ACCAGATCTCTGATCGAGATCTGCGCAAGAGGCCATCGGCACCGTGTGATCGGCCCA 613

Db 2027 ACCAGATCTCTGATCGAGATCTGCGCAAGAGGCCATCGGCACCGTGTGATCGGCCCA 2086

Qy 614 CCCCCTGGAACATCATCGGCCGCAACATGCTGACCCAGCTGGGCTGCACCTGAACTTCC 673

Db 2087 CCCCCTGGAACATCATCGGCCGCAACATGCTGACCCAGCTGGGCTGCACCTGAACTTCC 2146

Qy 674 CCATCAGCCCCCATCGAGACCGTGCCTGGAAGCTGAAGCCCGGATGACCGCCCAAGG 733

Db 2147 CCATCAGCCCCCATCGAGACCGTGCCTGGAAGCTGAAGCCCGGATGACCGCCCAAGG 2206

Qy 734 TGAAGCAGTGGCCCTGACCCGAGGAGAGATCAAGGCCCTGACCGCCATCTCTGCGAGGAGA 793

Db 2207 TGAAGCAGTGGCCCTGACCCGAGGAGAGATCAAGGCCCTGACCGCCATCTCTGCGAGGAGA 2266

Qy 794 TGGAGAGGAGGGCAAGATCAACAGATCGGCCCGGAGAACCCCTACAAACCCCGCTGT 853

Db 2267 TGGAGAGGAGGGCAAGATCAACAGATCGGCCCGGAGAACCCCTACAAACCCCGCTGT 2326

Qy 854 TCGCCATCAAGAAAGAGGACAGACCAAGTGGCGCAAGCTGTGGACTTCGCGAGCTGA 913

Db 2327 TCGCCATCAAGAAAGAGGACAGACCAAGTGGCGCAAGCTGTGGACTTCGCGAGCTGA 2386

Qy 914 ACAAGCGCACCCAGGACTTCTGGAGGTGCGAGTGGGGATCCCCACCCCGCGGCTTGA 973

Db 2387 ACAAGCGCACCCAGGACTTCTGGAGGTGCGAGTGGGGATCCCCACCCCGCGGCTTGA 2446

Qy 974 AGAAGAAAGAGCGTGAACCTGTCTGAGCTGGGGCAGCCCTTCTTACGCTGCCCTGG 1033

Db 2447 AGAAGAAAGAGCGTGAACCTGTCTGAGCTGGGGCAGCCCTTCTTACGCTGCCCTGG 2506

Qy 1034 ACGAGGACTTCGCGAAAGTACACCGCTTCACCATCCCCAGCATCAACAGAGACCCCG 1093

Db 2507 ACGAGGACTTCGCGAAAGTACACCGCTTCACCATCCCCAGCATCAACAGAGACCCCG 2566

Qy 1094 GCATCCGCTACAGTACAAACGTGTGCCCCAGGGCTGGAAGGGCAGCCCCAGCATCTTCC 1153

Db 2567 GCATCCGCTACAGTACAAACGTGTGCCCCAGGGCTGGAAGGGCAGCCCCAGCATCTTCC 2626

Qy 1154 AGAGCAGCATGACCMAGATCCTTGGAGCCCTTCCCGGCCCGCAACCCCGAGATCTGATCT 1213

Db 2627 AGAGCAGCATGACCMAGATCCTTGGAGCCCTTCCCGGCCCGCAACCCCGAGATCTGATCT 2686

Qy 1214 ACCAGTACATGACGACCTGTACGTGGGCGAGCTGAGATCGCCAGCAGCCCGCA 1273

Db 2687 ACCA-----GCCCGCTGTACGTGGGCGAGCTGAGATCGCCAGCAGCCCGCA 2740

Qy 1274 AGATCGAGGAGTGCAGAACCACTGTCTGCGTGGGGCTTCAACACCCCGCAAGAGC 1333

Db 2741 AGATCGAGGAGTGCAGAACCACTGTCTGCGTGGGGCTTCAACACCCCGCAAGAGC 2800

Qy 1334 ACCAGAGAGGCCCTTCTTCTGAGTGGGCTACGAGTGCACCCCGACAGTGGACCG 1393

Db 2801 ACCAGAGAGGCCCTTCTTCTGCGCAT-----CGAGCTGCACCCCGACAGTGGACCG 2854

Qy 1394 TGCAGCCCATCGAGTGCCTCGAGAGGAGAGCTGACCGTGAACACATCCAGAGAGCTGG 1453

Db 2855 TGCAGCCCATCGAGTGCCTCGAGAGGAGAGCTGACCGTGAACACATCCAGAGAGCTGG 2914

Qy 1454 TGGGCAAGCTGAACCTGGGCCAGCCAGATCTTACCCCGGATCAAGGTGGCGCCAGCTGTGA 1513

Db 2915 TGGGCAAGCTGAACCTGGGCCAGCCAGATCTTACCCCGGATCAAGGTGGCGCCAGCTGTGA 2974

Qy 1514 AGCTGCTCGCGGCGCCAAAGCCCTTGAACGATCTGCTGCCCTTGAACGAGAGGCGCGAGC 1573

Db 2975 AGCTGCTCGCGGCGCCAAAGCCCTTGAACGATCTGCTGCCCTTGAACGAGAGGCGCGAGC 3034

Qy 1574 TGGAGCTGGCGAGAACCGCGAGATCTTCCCGGAGCCCGTGCACCGCTGTACTACGACC 1633

Db 3035 TGGAGCTGGCGAGAACCGCGAGATCTTCCCGGAGCCCGTGCACCGCTGTACTACGACC 3094

Qy 1634 CCAGCAAGGACCTGTGGCGGAGATCCAGAGAGGGGCCACGACCACTGGACCTACCAGA 1693

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Db      3095  CCAGCAAGGACCTGTGGCCGAGATCCAGACAGGCGCACAGACCAAGTGAACCTTACAGAA 3154
Qy      1694  TCTACAGAGAGCCCTTCAAGAACTGAGAACCGGCAAGTAAAGCCAAAGATGCGACCGGCC 1753
Db      3155  TCTACAGAGAGCCCTTCAAGAACTGAGAACCGGCAAGTAAAGCCAAAGATGCGACCGGCC 3214
Qy      1754  ACACCAAGCAGCTGAAGCAGCTGACCGAGCGCGTGCAGAAAGATCCCATGAGAGCAATCG 1813
Db      3215  ACACCAAGCAGCTGAAGCAGCTGACCGAGCGCGTGCAGAAAGATCCCATGAGAGCAATCG 3274
Qy      1814  TGATCTGGGGCAGAACCCCCCAAGTTCGCGCTGCCATCCAGAGAGAACCTTGGAGACCT 1873
Db      3275  TGATCTGGGGCAGAACCCCCCAAGTTCGCGCTGCCATCCAGAGAGAACCTTGGAGACCT 3334
Qy      1874  GGTGACACGACTACTGCGAGAGCGCACCTGGATCCCGAGTGGAGTTCGTGAACAACCCCC 1933
Db      3335  GGTGACACGACTACTGCGAGAGCGCACCTGGATCCCGAGTGGAGTTCGTGAACAACCCCC 3394
Qy      1934  CCTGTGTAAGCTGTGTATCCAGCTGAGAAAGAACCCATCATCGGCGCCGAGACCTTCT 1993
Db      3395  CCTGTGTAAGCTGTGTATCCAGCTGAGAAAGAACCCATCATCGGCGCCGAGACCTTCT 3454
Qy      1994  ACGTGAAGCGCGCCCGCCACCGCGAGACCAAGATCGGCAAGCGCGCTTACTGACCGAAC 2053
Db      3455  ACGTGAAGCGCGCCCGCCACCGCGAGACCAAGATCGGCAAGCGCGCTTACTGACCGAAC 3514
Qy      2054  GGGGCGGCGAGAAAGCTGTGAGCTGACCGAGACCAACCAAGAAACCGGAGCTGGACGG 2113
Db      3515  GGGGCGGCGAGAAAGCTGTGAGCTGACCGAGACCAACCAAGAAACCGGAGCTGGACGG 3574
Qy      2114  CCATCAGACTGCGCCCTGAGAGACAGCGGACAGCGAGTGAACATCTGTGACCGACAGCCAGT 2173
Db      3575  CCATCAGACTGCGCCCTGAGAGACAGCGGACAGCGAGTGAACATCTGTGACCGACAGCCAGT 3634
Qy      2174  ACGCCCTTGGGCAATCTCAAGGCCCAAGCCGACAAAGCGAGCGAGCGAGCTGTGAACCGAA 2233
Db      3635  ACGCCCTTGGGCAATCTCAAGGCCCAAGCCGACAAAGCGAGCGAGCGAGCTGTGAACCGAA 3694
Qy      2234  TCATGAGCAGCTGATCAAGAAAGGAGAGTGTACTGAGCTGGGTGCGCCGCGCCCAAGG 2293
Db      3695  TCATGAGCAGCTGATCAAGAAAGGAGAGTGTACTGAGCTGGGTGCGCCGCGCCCAAGG 3754
Qy      2294  GCATCGGCGGCAACAGCAGATCGAACAGCTGTGAGCAAGGCGCATCCGCAAGTGTCTGT 2353
Db      3755  GCATCGGCGGCAACAGCAGATCGAACAGCTGTGAGCAAGGCGCATCCGCAAGTGTCTGT 3814
Qy      2354  TCTTGAAGCGCATCGATGGCGGCACTGTGATCTACAGTACATGAGCAACCTGTACTGTGG 2413
Db      3815  TCTTGAAGCGCATCGATGGCGGCACTGTGATCTACAGTACATGAGCAACCTGTACTGTGG 3874
Qy      2414  GCAGCGCGCGCCCTTAGG 2430
Db      3875  GCAGCGCGCGCCCTTAGG 3891

```

RESULT 12  
US-10-190-435-47

Sequence 47, Application US/10190435  
Publication No. US20030143248A1

GENERAL INFORMATION:

APPLICANT: ZUR MEGEDE, Jan  
APPLICANT: BARRETT, Susan W.

APPLICANT: LIAN, Ying

APPLICANT: ENGELBRECHT, Susan

APPLICANT: VAN RENSBURG, Estrellita J.

TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF

TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF

FILE REFERENCE: P1813.003 / 2302-18133

CURRENT APPLICATION NUMBER: US/10190,435

CURRENT FILING DATE: 2002-12-30

NUMBER OF SEQ ID NOS: 319

SOFTWARE: PatentIn Ver. 2.0

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; SEQ ID NO 47
; LENGTH: 3624
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence:
; OTHER INFORMATION: p2PolatRevRef.opt.native_c
US-10-190-435-47

Query Match      95.2%; Score 2349.4; DB 12; Length 3624;
Best Local Similarity 98.3%; Pred. No. 0;
Matches 2374; Conservative 0; Mismatches 41; Indels 0; Gaps 0;

Qy      7  GCCACATGCGCGGCGCATGAGCCAGGCGCCAGCGCAACATCTGATGACGCGACG 66
Db      1  GCCACATGCGCGGCGCATGAGCCAGGCGCCAGCGCAACATCTGATGACGCGACG 60
Qy      67  AACTTCAAGGGCCCAAGCGCATCATCAAGTCTTCAACTGCGCAAGAGAGGCGCACATC 126
Db      61  AACTTCAAGGGCCCAAGCGCATCATCAAGTCTTCAACTGCGCAAGAGAGGCGCACATC 120
Qy      127  GCCCGCAACTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 186
Db      121  GCCCGCAACTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 180
Qy      187  CAGATGAAGGACTGACCGAGCGCGCAAGCGCAACTTCTTCCGCGAGAGACTTGGCTTCCC 246
Db      181  CAGATGAAGGACTGACCGAGCGCGCAAGCGCAACTTCTTCCGCGAGAGACTTGGCTTCCC 240
Qy      247  CAGGGCAGAGGCGCGAGTTCGCCAGGAGAGAACCGCGCAACAGCCCGCCACAGCGCGC 306
Db      241  CAGGGCAGAGGCGCGAGTTCGCCAGGAGAGAACCGCGCAACAGCCCGCCACAGCGCGC 300
Qy      307  GAGGTGAGAGTGCAGCGCGCGCAACCCCGAGAGAGAGCGCGCGCGCGCGCGCGCGCGCG 366
Db      301  GAGGTGAGAGTGCAGCGCGCGCAACCCCGAGAGAGAGCGCGCGCGCGCGCGCGCGCGCG 360
Qy      367  CTGAACCTCCCGCAGATCACCTGTGAGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 426
Db      361  CTGAACCTCCCGCAGATCACCTGTGAGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 420
Qy      427  CAGATCAAGAGGCGCGCTGAGACCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 486
Db      421  CAGATCAAGAGGCGCGCTGAGACCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 480
Qy      487  CTGCGCGCGCAAGTGAAGGCCCAAGATGATCGAGCGCGCAATCGCGGCTTCATCAAGTGGCG 546
Db      481  CTGCGCGCGCAAGTGAAGGCCCAAGATGATCGAGCGCGCAATCGCGGCTTCATCAAGTGGCG 540
Qy      547  CAGTACGACGAGTCTGATCGAGATCTGCGGCGCAAGAGCGCATCGGACCGGTCTGATC 606
Db      541  CAGTACGACGAGTCTGATCGAGATCTGCGGCGCAAGAGCGCATCGGACCGGTCTGATC 600
Qy      607  GCGCCGCAACCGCGCGCAATCATGTGCGCGCGCAATCTGTGACCCAGCTGGGTGCAACCTTG 666
Db      601  GCGCCGCAACCGCGCGCAATCATGTGCGCGCGCAATCTGTGACCCAGCTGGGTGCAACCTTG 660
Qy      667  AACTTCCCATCAAGCCCATGAGACCGGTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 726
Db      661  AACTTCCCATCAAGCCCATGAGACCGGTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 720
Qy      727  CCNAGGTGAAGCAGTGGCCCTTGACCGAGAGAGAGTCAAGGCGCTGACCGCGCATCTGC 786
Db      721  CCNAGGTGAAGCAGTGGCCCTTGACCGAGAGAGAGTCAAGGCGCTGACCGCGCATCTGC 780
Qy      787  GAGGAGATGAGAGAGAGGCGCGCAAGTACCAAGATCGCGCGCGCGCGCGCGCGCGCGCG 846
Db      781  GAGGAGATGAGAGAGAGGCGCGCAAGTACCAAGATCGCGCGCGCGCGCGCGCGCGCGCG 840
Qy      847  CCGGTGTCGCGCATCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 906
Db      841  CCGGTGTCGCGCATCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 900

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QY 907 GAGCTGAACAGCGCACCCAGGACTTCTGGAGGTCAGCTGGCATCCCCACCCCGCC 966  
 Db 901 GAGCTGAACAGCGCACCCAGGACTTCTGGAGGTCAGCTGGCATCCCCACCCCGCC 960  
 QY 967 GGCCTGAAGAAGAAGAGCGCTGACCGCTGCTGGAGCTGGCGCACCCCTACTTTCAGCGTG 1026  
 Db 961 GGCCTGAAGAAGAAGAGCGTGACCGTCTGGAGCTGGCGCACCCCTACTTTCAGCGTG 1020  
 QY 1027 CCGCTGAGAGGAGCTTCGGAAGTACAGCGCTTCAACATCCCAAGATCAACAGAG 1086  
 Db 1021 CCGCTGAGAGGAGCTTCGGAAGTACAGCGCTTCAACATCCCAAGATCAACAGAG 1080  
 QY 1087 ACCCCGGGATCCGCTACAGTACACGCTGCTGCCCGGAGGCTGGAAGGCGAGCCCGAC 1146  
 Db 1081 ACCCCGGGATCCGCTACAGTACACGCTGCTGCCCGGAGGCTGGAAGGCGAGCCCGAC 1140  
 QY 1147 ATCTTCCAGAGCAGCATACCAAGATCTTGGAGCCCTTCCGGCGCGCAACCCCGAGATC 1206  
 Db 1141 ATCTTCCAGAGCAGCATACCAAGATCTTGGAGCCCTTCCGGCGCGCGCAACCCCGAGATC 1200  
 QY 1207 GTGATCTACAGTACATGAGAGCTGTAGTGGGAGGAGCACTTGAGATCGGCCAGCAC 1266  
 Db 1201 GTGATCTACAGTACATGAGAGCTGTAGTGGGAGGAGCACTTGAGATCGGCCAGCAC 1260  
 QY 1267 CGCGCCAGATCGAGAGCTCGCAAGACCTGCTGCTGGGCTTCAACACCCCGGAC 1326  
 Db 1261 CGCGCCAGATCGAGAGCTCGCAAGACCTGCTGCTGGGCTTCAACACCCCGGAC 1320  
 QY 1327 AAGAAGCACAGAGAGAGCCCGCTTCTGTGGATGGCTACGAGTGCACCCCGCAAG 1386  
 Db 1321 AAGAAGCACAGAGAGAGCCCGCTTCTGTGGATGGCTACGAGTGCACCCCGCAAG 1380  
 QY 1387 TGGACGCTCAGGCCATCGAGCTGCCGAGAGAGGAGCTGACCGTGAACGATCCAG 1446  
 Db 1381 TGGACGCTCAGGCCATCGAGCTGCCGAGAGAGGAGCTGACCGTGAACGATCCAG 1440  
 QY 1447 AAGCTGGTGGCAAGCTGAACCTGGGAGCCAGCAGATCTACCCGGGCTCAAGTGGCCAG 1506  
 Db 1441 AAGCTGGTGGCAAGCTGAACCTGGGAGCCAGCAGATCTACCCGGGCTCAAGTGGCCAG 1500  
 QY 1507 CTGTGAAGCTGTGGCGCGCGCAAGGCGCTTACCGACATCTGTGCGCTTACCGAGGAG 1566  
 Db 1501 CTGTGAAGCTGTGGCGCGCGCAAGGCGCTTACCGACATCTGTGCGCTTACCGAGGAG 1560  
 QY 1567 GCGAGCTGAGCTGCGCGAGAACCGCGAGATCTGCGGAGCCCTGTGACGCGGTGTAC 1626  
 Db 1561 GCGAGCTGAGCTGCGCGAGAACCGCGAGATCTGCGGAGCCCTGTGACGCGGTGTAC 1620  
 QY 1627 TAGGACCCAGCAAGACCTGTGGCGGAGATCCAGAAGCAGGCGCCAGCAGCTGAC 1686  
 Db 1621 TAGGACCCAGCAAGACCTGTGGCGGAGATCCAGAAGCAGGCGCCAGCAGCTGAC 1680  
 QY 1687 TACCAGATCTACAGAGCGCTTCAAGAACCTGAAGACCGGCAAGTACGCAAGTGC 1746  
 Db 1681 TACCAGATCTACAGAGCGCTTCAAGAACCTGAAGACCGGCAAGTACGCAAGTGC 1740  
 QY 1747 ACGCCCAACCAACACAGCTGAGCAGCTGACCGAGCCGTGCAAGATCGCCATGGAG 1806  
 Db 1741 ACGCCCAACCAACACAGCTGAGCAGCTGACCGAGCCGTGCAAGATCGCCATGGAG 1800  
 QY 1807 AGCATCTGATCTGGGGCAAGACCCCAAGTTCGGCTGCCATCCAGAAGGAGACTG 1866  
 Db 1801 AGCATCTGATCTGGGGCAAGACCCCAAGTTCGGCTGCCATCCAGAAGGAGACTG 1860  
 QY 1867 GAGACCTGTGAGCCGACTACTGGCAGGCACTTGATCCCGAGTGGAGTTTGTGAAC 1926  
 Db 1861 GAGACCTGTGAGCCGACTACTGGCAGGCACTTGATCCCGAGTGGAGTTTGTGAAC 1920  
 QY 1927 ACCCCCCCTGTGAGTGTGTTCCAGCTGGAAGAGAGCCCATCATTCGCGCCGAG 1986  
 Db 1921 ACCCCCCCTGTGAGTGTGTTCCAGCTGGAAGAGAGAGCCCATCATTCGCGCCGAG 1980  
 QY 1987 ACCTTCTAGTGAAGCGCGCCGACACCGGAGACCAAGATCGGCAAGGCGCGCTACGTG 2046

Db 1981 ACCTTCTAGTGAAGCGCGCCGACCCGAGACCAAGATCGGCAAGCGCGCTACGTG 2040  
 QY 2047 ACCGACCGGGCGCGCAGAAATCTGTAGCTTGAACCGAGACCAACCAAGAGACCGAG 2106  
 Db 2041 ACCGACCGGGCGCGCAGAAATCTGTAGCTTGAACCGAGACCAACCAAGAGACCGAG 2100  
 QY 2107 CTGAGGCGCATTCAGCTGGCTGCGGAGCAGCGGAGCGGAGCGAGGTGAACATCTGTGACCGAC 2166  
 Db 2101 CTGAGGCGCATTCAGCTGGCTGCGGAGCAGCGGAGCGGAGCGAGGTGAACATCTGTGACCGAC 2160  
 QY 2167 AGCCAGTACCGCTGGGCTGCGGAGCAGCGGAGCGGAGCGGAGCGAGGTGAACATCTGTGACCGAC 2226  
 Db 2161 AGCCAGTACCGCTGGGCTGCGGAGCAGCGGAGCGGAGCGGAGCGAGGTGAACATCTGTGACCGAC 2220  
 QY 2227 AACAGATCATCGAGCAGCTGATCAAGAGGAGAGGTTTACCTGAGCTGGGTGCCCGCC 2286  
 Db 2221 AACAGATCATCGAGCAGCTGATCAAGAGGAGAGGTTTACCTGAGCTGGGTGCCCGCC 2280  
 QY 2287 CACAAGGCGATCGGCGGCAACGAGCAGATCGAAGCTGTGAGCAAGGCGATTCGCAAG 2346  
 Db 2281 CACAAGGCGATCGGCGGCAACGAGCAGATCGAAGCTGTGAGCAAGGCGATTCGCAAG 2340  
 QY 2347 GTGCTGTTCTTGGACCGCATCGATCGCGCATCGTGTATCTACAGTACATGACGACCTG 2406  
 Db 2341 GTGCTGTTCTTGGACCGCATCGATCGCGCATCGTGTATCTACAGTACATGACGACCTG 2400  
 QY 2407 TACGTGGGCGCGCC 2421  
 Db 2401 CCAAGACCGCTGC 2415

RESULT 13  
 US-10-190-435-48  
 ; Sequence 48, Application US/10190435  
 ; Publication No. US20030143248A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: ZUR MEDEDE, Jan  
 ; APPLICANT: BARNETT, Susan W.  
 ; APPLICANT: LIAN, Ying  
 ; APPLICANT: ENGELBRECHT, Susan  
 ; APPLICANT: VAN RENSBURG, Estrelita J.  
 ; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C  
 ; TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF  
 ; FILE REFERENCE: PPI8133.003 / 2302-18133  
 ; CURRENT APPLICATION NUMBER: US/10/190,435  
 ; CURRENT FILING DATE: 2002-12-30  
 ; NUMBER OF SEQ ID NOS: 319  
 ; SOFTWARE: Patent In Ver. 2.0  
 ; SEQ ID NO 48  
 ; LENGTH: 3607  
 ; TYPE: DNA  
 ; ORGANISM: Artificial Sequence  
 ; FEATURE:  
 ; OTHER INFORMATION: Description of Artificial Sequence: p2PolTatRevNef.opt\_C  
 US-10-190-435-48

Query Match 93.2%; Score 2301.8; DB 12; Length 3607;  
 Best Local Similarity 97.6%; Pred. No. 0;  
 Matches 2362; Conservative 0; Mismatches 47; Indels 12; Gaps 2;  
 QY 1 GTGAGCGCACCATGGCGAGCGCATGAGCCATGAGCCAGGCGCACCGCGCAACATCTGTATGAG 60  
 Db 1 GTGAGCGCACCATGGCGAGCGCATGAGCCAGGCGCACCGCGCAACATCTGTATGAG 60  
 QY 61 CCGACCAACTTCAAGGCGCCCAAGCGCATCATCAAGTCTTCAACTGCGGCGAGGAGGCG 120  
 Db 61 CCGACCAACTTCAAGGCGCCCAAGCGCATCATCAAGTCTTCAACTGCGGCGAGGAGGCG 120  
 QY 121 CACATCGCGCGCAACTGCGCGGCCCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 180  
 Db 121 CACATCGCGCGCAACTGCGCGGCCCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 180

QY	181	GGCCACCGAGATGAAGAGACTGACACCGAGGCCAGGCGCAACTTTCTTCCGAGAGAGACTGGCC	240
Db	181	GGCCACCGAGATGAAGAGACTGACACCGAGGCCAGGCGCAACTTTCTTCCGAGAGAGACTGGCC	240
QY	241	TTCCCCCGAGGCGAAGGCGCGGAGAGTTCCCGACGAGCGAAGAACCGCGCAACAGCGCCACC	300
Db	241	TTCCCCCGAGGCGAAGGCGCGGAGAGTTCCCGACGAGCGAAGAACCGCGCAACAGCGCCACC	300
QY	301	AGCCGCGAGCTGCAGAGTGCGGCGACACCCCGACGAGGCCGGCGCGGAGCGCAG	360
Db	301	AGCCGCGAGCTGCAGAGTGCGGCGACACCCCGACGAGGCCGGCGCGGAGCGCAG	360
QY	361	GGCAACCCGAGACTTCCCGACAGATACCCCTGGGGAGAGGCCCGCCCTGGAGAGATCAAGT	420
Db	361	GGCAACCCGAGACTTCCCGACAGATACCCCTGGGGAGAGGCCCGCCCTGGAGAGATCAAGT	420
QY	421	GGCGGCGAGATCAAGAGAGGCCCTGTGTGACACCGCGCGCGACACCCGTCTTGAAGAG	480
Db	421	GGCGGCGAGATCAAGAGAGGCCCTGTGTGACACCGCGCGCGACACCCGTCTTGAAGAG	480
QY	481	ATGAGCCCTGCCCCGCAATGGAAGCCCAAGTATCCGGCGGCATCCGGGGTTTATCAAG	540
Db	481	ATGAGCCCTGCCCCGCAATGGAAGCCCAAGTATCCGGCGGCATCCGGGGTTTATCAAG	540
QY	541	GTGGCGCAGTAGACGACAGATCCTGTATCAGATCTGCGGACAAAGAGGCCATCGACCGTG	600
Db	541	GTGGCGCAGTAGAGACGATCCTGTATCAGATCTGTGCGGACAAAGAGGCCATCGGACCGTG	600
QY	601	CTGATCGAGCCCAACCCCGCTGATCACTCATCGCGCGCAACATGTCTGACCTGAGCTGGCTC	660
Db	601	CTGATCGAGCCCAACCCCGCTGATCACTCATCGCGCGCAACATGTCTGACCTGAGCTGGCTC	660
QY	661	ACCCGGAACCTTCCCATCAGCCCATCGACACCGGACCGGTCGAAAGCTCAACCCGGCGATG	720
Db	661	ACCCGGAACCTTCCCATCAGCCCATCGACACCGGACCGGTCGAAAGCTCAACCCGGCGATG	720
QY	721	GACGGCCCCAAGGTGAAGCAAGTGGCCCTGTGACCGAGAGAAAGATCAAGGCCCTGACGCGC	780
Db	721	GACGGCCCCAAGGTGAAGCAAGTGGCCCTGTGACCGAGAGAAAGATCAAGGCCCTGACGCGC	780
QY	781	ATCTGCGAGAGATGAGAGAGAGAGGCGCAAGTACCAAGATTCGGCCCCGAGAACCCCTAC	840
Db	781	ATCTGCGAGAGATGAGAGAGAGAGGCGCAAGTACCAAGATTCGGCCCCGAGAACCCCTAC	840
QY	841	AACACCCCGGTGTTGCCATCAAGAAAGAGACAGACACCAATGGCGGCAACTGATGAGAC	900
Db	841	AACACCCCGGTGTTGCCATCAAGAAAGAGACAGACACCAATGGCGGCAACTGATGAGAC	900
QY	901	TTTCGCGAGCTGAAACAAGCGACCCGAGACTTCTGGAGAGGTGCAGCTGAGGATCCGCCAC	960
Db	901	TTTCGCGAGCTGAAACAAGCGACCCGAGACTTCTGGAGAGGTGCAGCTGAGGATCCGCCAC	960
QY	961	CCCGCGGCGCTGAAGAAAGAAAGAGACGTGACCGTGTGAGAGGTGGGAGACGCTACTTTC	1020
Db	961	CCCGCGGCGCTGAAGAAAGAAAGAGAGCGTGAACGTGTGAGAGGTGGGAGACGCTACTTTC	1020
QY	1021	AGCGTGCCTCTGAGACGAGACTTCCCGCAAGTACACCGCTTACCATCTCCACGATCAAC	1080
Db	1021	AGCGTGCCTCTGAGACGAGACTTCCCGCAAGTACACCGCTTACCATCTCCACGATCAAC	1080
QY	1081	AACGAGACCCCGCGCATCCGCTACCCAGTACAACGTCGCCCGACGAGCTGGAAGGCGACG	1140
Db	1081	AACGAGACCCCGCGCATCCGCTACCCAGTACAACGTCGCCCGACGAGCTGGAAGGCGACG	1140
QY	1141	CCGAGCATCTTCCAGAGCAGATGACCAAGATCCTGAGACCTTTCGCGCCGCAACCC	1200
Db	1141	CCGAGCATCTTCCAGAGCAGATGACCAAGATCCTGAGACCTTTCGCGCCGCAACCC	1200
QY	1201	GAGATCGAGATCTTACAGATACATGAGACGACCTGTACCGTGGCGGAGGAGCATGGAAGATCGGG	1260
Db	1201	GAGATCGAGATCTTACCA-----GGCCCCCTCTGACGTGGGAGGAGCATGGAAGATCGGG	1254
QY	1261	CAGCACCGCGCCAGATGAGAGAGCTGGCGAAGCACTGTCTGCGCTGGGGCTTCAACGACC	1320

[illegible]

Db 2329 CGCAAGGTGCTGGAATTCAGAGCCCTGTGACCCCAACCTGGAGCCCTGGAAACACCCCGGC 2388  
 QY 2401 GACCTGTACGTGGCAGCGSC 2421  
 Db 2389 AGCCAGCCCAAGACCCCGGC 2409  
 RESULT 14  
 US-10-190-435-46  
 ; Sequence 46, Application US/10190435  
 ; Publication No. US20030143248A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: ZUR MEDEDE, Jan  
 ; APPLICANT: BARNETT, Susan W.  
 ; APPLICANT: LIAN, Ying  
 ; APPLICANT: ENGELBRECHT, Susan  
 ; APPLICANT: VAN RENSBURG, Estrelita J.  
 ; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C  
 ; FILE REFERENCE: P18133.003 / 2302-18133  
 ; CURRENT APPLICATION NUMBER: US/10/190,435  
 ; CURRENT FILING DATE: 2002-12-30  
 ; NUMBER OF SEQ ID NOS: 319  
 ; SOFTWARE: PatentIn Ver. 2.0  
 ; SEQ ID NO 46  
 ; LENGTH: 3597  
 ; TYPE: DNA  
 ; ORGANISM: Artificial Sequence  
 ; FEATURE:  
 ; OTHER INFORMATION: Description of Artificial Sequence: p2PolTatRevNef opt C  
 US-10-190-435-46  
 Query Match 92.5%; Score 2283.6; DB 12; Length 3597;  
 Best Local Similarity 98.9%; Pred. No. 0;  
 Matches 2324; Conservative 0; Mismatches 14; Indels 12; Gaps 2;  
 QY 4 GAGCCACCATGCCGAGGCCATGACCCAGGCCACCCAGCGGCCCAACATCTGTATGACGCGC 63  
 Db 1258 GACTGCGAATTCGCGAGGCCATGAGCCAGGCCACCCAGCGGCCCAACATCTGTATGACGCGC 1317  
 QY 64 AGCACTTCAAGGGCCCCAAGGCATCATCAAGTGTCTTCACTGGGCAAGGAGGCCAC 123  
 Db 1318 AGCACTTCAAGGGCCCCAAGGCATCATCAAGTGTCTTCACTGGGCAAGGAGGCCAC 1377  
 QY 124 ATCGCCCGCAACTGCGCGCCCCCGCAAGAGGGCTGTGGAAGTGGCGCAAGAGGGC 183  
 Db 1378 ATCGCCCGCAACTGCGCGCCCCCGCAAGAGGGCTGTGGAAGTGGCGCAAGAGGGC 1437  
 QY 184 CACCAATGAAGACTGCAACCGAGCCAGGCCAATCTTTCGCGAGGACCTGGCCCTTC 243  
 Db 1438 CACCAATGAAGACTGCAACCGAGCCAGGCCAATCTTTCGCGAGGACCTGGCCCTTC 1497  
 QY 244 CCCCAGGGCAAGCCCGGAGTTCCTCCAGCGAGCAACCGCGCCCAACAGCCCCACCGC 303  
 Db 1498 CCCCAGGGCAAGCCCGGAGTTCCTCCAGCGAGCAACCGCGCCCAACAGCCCCACCGC 1557  
 QY 304 CGCGAGCTCAGGTGCGCGCGCAACACCCCGCAGCGAGCCCGCGCGCGCCAGCGCCAGGGC 363  
 Db 1558 CGCGAGCTCAGGTGCGCGCGCAACACCCCGCAGCGAGCCCGCGCGCGCCAGCGCCAGGGC 1617  
 QY 364 ACCCTGAATTCCTCCAGATACCTTGTGCGAGCGCCCTGTGTAGCATCAAGTGGGC 423  
 Db 1618 ACCCTGAATTCCTCCAGATACCTTGTGCGAGCGCCCTGTGTAGCATCAAGTGGGC 1677  
 QY 424 GGCAGATCAAGAGGCCCTTGTGCAACCGCGCGCATCGCGGGCTTCATCAGGATG 483  
 Db 1678 GGCAGATCAAGAGGCCCTTGTGCAACCGCGCGCATCGCGGGCTTCATCAGGATG 1737  
 QY 484 AGCCTCCCGCAAGTGGAGGCCCAAGATGATCGCGGGCATCGCGGGCTTCATCAGGATG 543  
 Db 1738 AGCCTCCCGCAAGTGGAGGCCCAAGATGATCGCGGGCATCGCGGGCTTCATCAGGATG 1797  
 QY 544 CGCCAGTACGACCATCTGTATCGAGATCTGTGGCAAGAGGCCATCGCGCCCGTGTG 603

Db 1798 CGCAGTACGACCATCTGTATCGAGATCTGCGCAGAGAGGCCATCGGCACCGTGTG 1857  
 QY 604 ATCGCCCGCAACCCCGTGAACATCATCGCGCGCAACATGCTGACCCAGTGGGGTGCACC 663  
 Db 1858 ATCGCCCGCAACCCCGTGAACATCATCGCGCGCAACATGCTGACCCAGTGGGGTGCACC 1917  
 QY 664 CTGAACCTTCCCATCAGCCCATCAGAGCCCATGAGACCGTGGCGTGAAGCTGAAGCCCGCATGAC 723  
 Db 1918 CTGAACCTTCCCATCAGCCCATCAGAGCCCATGAGACCGTGGCGTGAAGCTGAAGCCCGCATGAC 1977  
 QY 724 GCGCCCAAGGTGAAGCAGTGGCCCTGACCGAGGAGAGATCAAGGCCCTTGAACCGCATC 783  
 Db 1978 GCGCCCAAGGTGAAGCAGTGGCCCTGACCGAGGAGAGATCAAGGCCCTTGAACCGCATC 2037  
 QY 784 TCGAGGAGATGGAGAGAGGAGGAGATCACCAGATCGGCCCGCGAGAACCCCTTACAC 843  
 Db 2038 TCGAGGAGATGGAGAGAGGAGGAGATCACCAGATCGGCCCGCGAGAACCCCTTACAC 2097  
 QY 844 ACCCCCGTGTTCGCCATCAAGAGAGAGAGACACCAAGTGGCGCAAGCTGTGACTTC 903  
 Db 2098 ACCCCCGTGTTCGCCATCAAGAGAGAGAGACACCAAGTGGCGCAAGCTGTGACTTC 2157  
 QY 904 CGCAGCTGAACAAAGCGCACCCAGACTTCTGGAGGTGACAGTGGGCATCCCCCAACCCC 963  
 Db 2158 CGCAGCTGAACAAAGCGCACCCAGACTTCTGGAGGTGACAGTGGGCATCCCCCAACCCC 2217  
 QY 964 GCGCCCTTGAAGAGAGAGAGAGAGTGTGAGAGTGGAGTGGCGAGCGCTTACTTTCAGC 1023  
 Db 2218 GCGCCCTTGAAGAGAGAGAGAGTGTGAGAGTGGAGTGGCGAGCGCTTACTTTCAGC 2277  
 QY 1024 GTGCCCTTGGAGAGACTTTCGCAAGTACACCGCTTACCATCCCGAGCATCAACAC 1083  
 Db 2278 GTGCCCTTGGAGAGACTTTCGCAAGTACACCGCTTACCATCCCGAGCATCAACAC 2337  
 QY 1084 GAGACCCCGCATCCGCTACAGTACAAAGTGTGCCCGAGGTGGAAGGCGAGCCGCC 1143  
 Db 2338 GAGACCCCGCATCCGCTACAGTACAAAGTGTGCCCGAGGTGGAAGGCGAGCCGCC 2397  
 QY 1144 AGCATCTTCCAGAGCAGATGACCAAGATCTGGAGCGCTTCCGCGCGCGCAACCCCGAG 1203  
 Db 2398 AGCATCTTCCAGAGCAGATGACCAAGATCTGGAGCGCTTCCGCGCGCGCAACCCCGAG 2457  
 QY 1204 ATCGTGTACTACAGTACATGAGCAGCTGTACGTGGCAGCGACTGAGATCGGCCAG 1263  
 Db 2458 ATCGTGTACTACCA -----GGCCCCCTGTACGTGGCAGCGACTGAGATCGGCCAG 2511  
 QY 1264 CACCGCGCAAGATCGAGAGCTGCGCAAGCACTGTGCGTGGGGTTCACACCCGCC 1323  
 Db 2512 CACCGCGCAAGATCGAGAGCTGCGCAAGCACTGTGCGTGGGGTTCACACCCGCC 2571  
 QY 1324 GACAGAGAGCCAGAGAGGCCCTTCTGTGGTGGGTACGAGTGCACCCCGAC 1383  
 Db 2572 GACAGAGAGCCAGAGAGGCCCTTCTGTGGTGGGTACGAGTGCACCCCGAC 2625  
 QY 1384 AAGTGGAGCTGTCAGCCCATCGAGTGGCGCGAGAGAGTGGAGCTGAAACGACATC 1443  
 Db 2626 AAGTGGAGCTGTCAGCCCATCGAGTGGCGCGAGAGAGTGGAGCTGAAACGACATC 2685  
 QY 1444 CAGAGCTGTGGGCAAGTGAATGGCGCGAGAGTACTACCCCGCATCAAGTGGGC 1503  
 Db 2686 CAGAGCTGTGGGCAAGTGAATGGCGCGAGAGTACTACCCCGCATCAAGTGGGC 2745  
 QY 1504 CAGCTGTGCAAGCTGCTCGCGCGCGCAAGGCCCTGACCGACATCGTGGCCCTGACCGAG 1563  
 Db 2746 CAGCTGTGCAAGCTGCTCGCGCGCGCAAGGCCCTGACCGACATCGTGGCCCTGACCGAG 2805  
 QY 1564 GAGGCCGAGCTGGAGCTGGCGAGAACCGCGAGATCTCGCGCGAGCCCGTGCACCGCGTG 1623  
 Db 2806 GAGGCCGAGCTGGAGCTGGCGAGAACCGCGAGATCTCGCGCGAGCCCGTGCACCGCGTG 2865  
 QY 1624 TACTACGACCCAGCAAGGACCTGTGTGGCGAGATCTCAGAGAGAGGCGCACGACCGAGTGG 1683

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Db      2866 TACTACGACCCCGACAGGACCTGTGGCCGAGATTCAGAAAGCAGAGCCACGACCATGTGG 2925
Qy      1684 ACCTACGAGATCTACAGAGAGCCCTTCAAGAACCTGAGACCGGGAAGTAAAGCCAAATG 1743
Db      2926 ACCTACGAGATCTACAGAGAGCCCTTCAAGAACCTGAGAACCGGGAAGTAAAGCCAAATG 2985
Qy      1744 CGCACCGCCGACACCAAGCAGACGCTGAAGAGCTGACCCGAGCGCTGCAAGAGTGCATG 1803
Db      2986 CGCACCGCCGACACCAAGCAGACGCTGAAGAGCTGACCCGAGCGCTGCAAGAGTGCATG 3045
Qy      1804 GAGAGCATGTGATCTGAGGAGAGACCCCAAGTTCCGCTGCTCCATTCAGAGAGAGC 1863
Db      3046 GAGAGCATGTGATCTGAGGAGAGACCCCAAGTTCCGCTGCTCCATTCAGAGAGAGC 3105
Qy      1864 TGGGAGACCTGTGACCGACCTACCTGAGAGCGCAACCTGATCCCGGATGGAGAGTTCGTG 1923
Db      3106 TGGGAGACCTGTGACCGACCTACCTGAGAGCGCAACCTGATCCCGGATGGAGAGTTCGTG 3165
Qy      1924 AACACCCCGCCCTGTGTAAGCTGTGTACCAAGCTGAGAGAGAGAGCCCATCATCGCGCC 1983
Db      3166 AACACCCCGCCCTGTGTAAGCTGTGTACCAAGCTGAGAGAGAGAGCCCATCATCGCGCC 3225
Qy      1984 GAGACCTTCTACGTGAGACGCGCGCCCAACCGGAGACCAAGATGCGAGAGCGCGCTAC 2043
Db      3226 GAGACCTTCTACGTGAGACGCGCGCCCAACCGGAGACCAAGATGCGAGAGCGCGCTAC 3285
Qy      2044 GTGACCGACCGGAGCGCGGAGAGATCTGTAGACCTGACCGAGACCAACCAAGAGAGC 2103
Db      3286 GTGACCGACCGGAGCGCGGAGAGATCTGTAGACCTGACCGAGACCAACCAAGAGAGC 3345
Qy      2104 GAGCTGACAGCGCATCAGCTGGCCCTGTGAGAGACAGCGGAGCGAGAGTGAACATCTGTACC 2163
Db      3346 GAGCTGACAGCGCATCAGCTGGCCCTGTGAGAGACAGCGGAGCGAGAGTGAACATCTGTACC 3405
Qy      2164 GACAGCCGATACGCTTGGGCTCATTCAGAGCCCGACCGGAGAGAGAGAGAGAGAGAGAGC 2223
Db      3406 GACAGCCGATACGCTTGGGCTCATTCAGAGCCCGACCGGAGAGAGAGAGAGAGAGAGAGC 3465
Qy      2224 GTGAACCAAGATCATGAGAGCTGATCAAGAGAGAGAGAGTGTACCTGAGCTGAGTGCCTC 2283
Db      3466 GTGAACCAAGATCATGAGAGCTGATCAAGAGAGAGAGAGTGTACCTGAGCTGAGTGCCTC 3525
Qy      2284 GCCCAAGAGGAGATGCGCGGACAGAGAGATGACCAAGCTGTGAGAGAGAGAGATTCGC 2343
Db      3526 GCCCAAGAGGAGATGCGCGGACAGAGAGATGACCAAGCTGTGAGAGAGAGAGATTCGC 3585
Qy      2344 AAGGTGCTGT 2353
Db      3586 AAGGTGCTGT 3595

RESULT 15
US-10-241-009-32
; Sequence 32, Application US/10241009
; Publication No. US20030170614A1
; GENERAL INFORMATION:
; APPLICANT: ZUR MEGEDE, Jan
; APPLICANT: BARNETT, Susan
; APPLICANT: LIAN, Ying
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE B
; FILE REFERENCE: 2300-1621.21
; CURRENT APPLICATION NUMBER: US/10/241,009
; CURRENT FILING DATE: 2002-12-13
; NUMBER OF SEQ ID NOS: 68
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 32
; LENGTH: 2472
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: pZPolopt.SF2
US-10-241-009-32

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Best Local Similarity 92.8%; Pred. No. 0;
Matches 2293; Conservative 0; Mismatches 164; Indels 15; Gaps 3;

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[illegible]

Search completed: October 12, 2003, 17:33:21  
Job time : 446.728 secs

GenCore version 5.1.6  
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OM nucleic - nucleic search, using sw model

Run on: October 12, 2003, 11:43:37 ; Search time 113.057 Seconds  
(without alignments)  
9592.294 Million cell updates/sec

Title: US-09-610-313-32

Perfect score: 2457

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Scoring table: IDENTITY\_NUC

Gapop 10.0 , Gapext 1.0

Searched: 569978 segs, 220691566 residues

Total number of hits satisfying chosen parameters: 1139956

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Listing first 45 summaries

Database : Issued Patents NA:\*

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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2	1599.4	65.1	9772	4	US-09-552-950-5
3	1178.4	48.0	9010	4	US-09-184-418C-8
4	1147.4	46.7	8972	4	US-09-184-418C-9
5	1140.2	45.4	8959	4	US-09-184-418C-11
6	1116.8	45.5	8992	4	US-09-184-418C-4
7	1081.6	44.0	2601	3	US-09-117-217-7
8	1081.6	44.0	2601	3	US-09-117-217-9
9	1081.6	44.0	2601	3	US-09-117-217-11
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42	1029.2	41.9	8933	3	US-08-463-210-4	Sequence 4, Appl
43	1029.2	41.9	8933	3	US-09-620-958A-3	Sequence 3, Appl
44	1029.2	41.9	8933	3	US-09-620-958A-4	Sequence 4, Appl
45	1029.2	41.9	8933	3	US-09-620-958A-9	Sequence 9, Appl

RESULT 1  
US-09-552-950-2  
; Sequence 2, Application US/09552950  
; Patent No. 6541248  
; GENERAL INFORMATION:  
; APPLICANT: Oxford Biomedica (UK) Limited  
; TITLE OF INVENTION: Anti-Viral Vectors  
; FILE REFERENCE: 674524-2004  
; CURRENT APPLICATION NUMBER: US/09/552.950  
; CURRENT FILING DATE: 2000-04-20  
; NUMBER OF SEQ ID NOS: 22  
; SOFTWARE: Patentin ver. 2.1  
; SEQ ID NO 2  
; LENGTH: 4307  
; TYPE: DNA  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: Description of Artificial Sequence:gagpol-SYNpp - codon  
; OTHER INFORMATION: optimised gagpol sequence  
US-09-552-950-2

Query Match	66.2%	Score	1626.6	DB	4	Length	4307
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 ; Sequence 5, Application US/09552950  
 ; Patent No. 6541248  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Oxford Biomedica (UK) Limited  
 ; TITLE OF INVENTION: Anti-Viral Vectors  
 ; FILE REFERENCE: 674524-2004  
 ; CURRENT APPLICATION NUMBER: US/09/552, 950  
 ; CURRENT FILING DATE: 2000-04-20

; NUMBER OF SEQ ID NOS: 22  
; SOFTWARE: PatentIn Ver. 2.1  
; SEQ ID NO 5  
; LENGTH: 9772  
; TYPE: DNA  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: Description of Artificial Sequence: pSYNGP  
US-09-552-950-5

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Matches 1934; Conservative 0; Mismatches 411; Indels 28; Gaps 6;  
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DB 4232 CGGATACGCTAAGTGAAGCGCGCGGAGAGAGAGTGTGACCTCTACTGACACCAACCA 4291
QY 2085 GAAAGCCGAGTGAAGCGCGCGCATTCAGCTGCGCTGAGAGACAGCGCGGAGAGTGAACAT 2144
DB 4292 GAAAGCTAAGTGAAGCGCGCGCATTCAGCTGCGCTGAGAGACTGCGCGCTGAGAGTGAACAT 4351
QY 2145 CGTGAACGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 2204
DB 4352 CGTGAACGAGCTGAGTATGCTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 4411
QY 2205 CGAGCTGTGAACGAGTATGAGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 2264
DB 4412 CGAGCTGTGATCATCATCATCATCATCATCATCATCATCATCATCATCATCATCATCAT 4471
QY 2265 GGTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 2324
DB 4472 GGTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 4531
QY 2325 CATCCGCAAGGTGTCTGTCTCTGAGCGCGCATCGA 2357
DB 4532 CATCAGGAAGGTGTCTGTCTCTGAGCGCGCATCGA 4564

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RESULT 3
US-09-184-418C-8
; Sequence 8, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 8
; LENGTH: 9010
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURES:
; OTHER INFORMATION: isolate=962651; 137..1621:"gag"; 1426..4425:"pol";
; OTHER INFORMATION: 4370..4948:"vif"; 4888..5178:"vpr";
; OTHER INFORMATION: 5159..5373..7734..7824:"tat"; 5298..5373..7734..7981:"rev";
; OTHER INFORMATION: 5387..5647:"vpu"; 5565..8171:"env"; 8173..8793:"nef"
US-09-184-418C-8

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Query Match 48.0%; Score 1178.4; DB 4; Length 9010;
Best Local Similarity 69.7%; Pred. No. 1.3e-184;
Matches 1642; Conservative 0; Mismatches 701; Indels 13; Gaps 3;

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QY 14 TGGCGAGGCGCATGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 73
DB 1221 TGGCGAGGCGCATGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 1280
QY 74 AGGCGCGCGCGCATGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 133
DB 1281 AAGGAATTAAGATGTTAATGTTAATGTTAATGTTAATGTTAATGTTAATGTTAATGTTA 1340
QY 134 ACTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 193
DB 1341 ATTGAGGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 1400
QY 134 AGGACTGACGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 253
DB 1401 AAGACTGTAAGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 1459

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QY 254 AGGCGCGCGAGTTCCTCCGAGCGAGCGAGAACCGCGCGCAAGCGCCGAGCGCGAGCTGC 313
DB 1460 AGGCGCGAGGAAATTCCTCCGAGCGAGCGAGAACCGCGCGCAAGCGCCGAGCGAGAGCTTC 1519
QY 314 AGGTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 373
DB 1520 AGGTTCGAGGAGCAACCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 1579
QY 374 TCCTCCGAGTACCTGTTGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 433
DB 1580 TCCTCCGAGTACCTGTTGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 1639
QY 434 AGGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 493
DB 1640 AGGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 1699
QY 494 GCAAGTGGAAGCCGAGATGATCGCGCGCATCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 553
DB 1700 GCAATGGAAGCCGAGATGATGAGGAGATGAGAGGCTTATGAGAGTAAAGCAATATG 1759
QY 554 ACCGAGTCTGATGAGATCTGCGCGCGAGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 613
DB 1760 ATCAAAATCCTATGAGAAATTTGTGAGAAAGCGCTATAGTACGATTTATGAGACCTA 1819
QY 614 CCGCGTGAACATCATCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 673
DB 1820 CACCTGTCAATATTTGAGAGAAATATGTTGATCTGAGCTTGATGACATTAATTTTC 1879
QY 674 CCATGAGCCCATCGAGACCTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 733
DB 1880 CAATTAAGTCTATGAAACTGTACAGTAAATTAAGCCGAGATGATGAGCGCGCGCGCGCG 1939
QY 734 TGAAGCAGTGGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 793
DB 1940 TTAACCATGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 1999
QY 794 TGGAGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 853
DB 2000 TGGAGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 2059
QY 854 TGGCGATCAAGAGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 913
DB 2060 TTGCGCATTAAGAGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 2119
QY 914 ACAAGCGACCGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 973
DB 2120 ATTAAGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 2179
QY 974 AGAAGAGAGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 1033
DB 2180 AAAAGAGAGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 2239
QY 1034 ACGAGGACTTCGCGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 1093
DB 2240 ATGAAGGCTTCAGAGAAATATATCTGATTCACCATTAAGTAAAGGAGGAGGAGGAGGAGGAG 2299
QY 1094 GCATCGGTACAGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 1153
DB 2300 GATTAAGTATCAATATATATATATATATATATATATATATATATATATATATATATATAT 2359
QY 1154 AGAGAGCATGACCAAGATCTGAGAGGCGCTTCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 1213
DB 2360 AGAGTATGATGACCAAAATCTTGAAGCGCTTCGAGGCGCAAAATCTGAGAGTATGATCATCT 2419
QY 1214 ACCA-----GCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 1267
DB 2420 ATCAATATATATATATATATATATATATATATATATATATATATATATATATATATATAT 2479
QY 1268 AGATCGAGGAGCTGCGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 1327
DB 2480 AATATGAGAGGTTAAGAGAGCATCTATTAAGTGGGAGTTTACACACCGAGCAAGAGAAC 2539

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QY 1328 ACCAGAGGAGCCCTTCTCTGCCCAT-----CGAGCTGACCCCGACAGTGGACG 1381
Db 1329 ATGAGAGAGACCCCACTTCTTGATGGGTATGAATCTCATCTTGACAAATGGACG 2599
QY 1382 TGCAGCCCATCAGCTGCCCGAGAGAGAGCTGACCGCTGAAGACATCCAGAGCTGG 1441
Db 1383 TACAGCTTATACAGCTGGCAGAGAGAGATAGCTGACTGTTAATGATATACAGAGTTAG 2659
QY 1442 TGGCGAGCTGAATCTGGCCGACGACGATCTACCCGGCATCAAGTGGCGGAGCTGCA 1501
Db 1443 TGGCGAGCTGAATCTGGCCGACGACGATCTACCCGGCATCAAGTGGCGGAGCTGCA 2719
QY 1502 AGCTCTGGCGGCCCGCCAGGCTGACCGCATCTGCTGCTGACCGAGGAGCGGAGC 1561
Db 1503 AGCTCTGGCGGCCCGCCAGGCTGACCGCATCTGCTGCTGACCGAGGAGCGGAGC 2779
QY 1562 TGGAGCTGGCCGAGAACCCCGAGATCTCTGGCGAGCCCGCTGACGGCTGTACTACGAC 1621
Db 1563 TGGAGCTGGCCGAGAACCCCGAGATCTCTGGCGAGCCCGCTGACGGCTGTACTACGAC 2839
QY 1622 CCAGCAAGGACCTGTGGCCGAGATCCAGAGCAGGCGCAGACCACTGGACCTACGAG 1681
Db 1623 CCAGCAAGGACCTGTGGCCGAGATCCAGAGCAGGCGCAGACCACTGGACCTACGAG 2899
QY 1840 CATCAAAAGACTTGATGCTGAATACAGAAACAAAGGCGCATGACCAATGGACATCAAA 1899
Db 1841 CATCAAAAGACTTGATGCTGAATACAGAAACAAAGGCGCATGACCAATGGACATCAAA 3019
QY 1842 TCTACAGAGGCTTCAAGAACCTGAAAGCGGCAAGTACGCCAAGATGGCGACGCGCC 1741
Db 1843 TCTACAGAGGCTTCAAGAACCTGAAAGCGGCAAGTACGCCAAGATGGCGACGCGCC 2959
QY 1742 ACACCAACGAGCTGAAGCAGCTGACCGAGGCGCTGCAAGATGCCATGGAGAGCATCG 1801
Db 1743 ACACCAACGAGCTGAAGCAGCTGACCGAGGCGCTGCAAGATGCCATGGAGAGCATCG 3019
QY 1802 TGAATCGGGCAAGACCCCAAGTTCGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 1861
Db 1803 TGAATCGGGCAAGACCCCAAGTTCGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 3079
QY 3020 TAATATGGGAAAGATTCCTAAATTTAGACTACCCATCCAAAGAAACATGGGAAACAT 1921
Db 3021 TAATATGGGAAAGATTCCTAAATTTAGACTACCCATCCAAAGAAACATGGGAAACAT 3139
QY 1862 GGTGACCGACTACTGGCAGGCGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 1981
Db 1863 GGTGACCGACTACTGGCAGGCGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 3199
QY 3140 TCTTAGTAAATTTAGTACCGCTGGAGAAAGAACCCATAGTAGGAGCAGAAACCTTCT 1981
Db 3141 TCTTAGTAAATTTAGTACCGCTGGAGAAAGAACCCATAGTAGGAGCAGAAACCTTCT 3199
QY 1982 AGTGGAGGCGCCCGACCGCAGACCAAGATCGGCAAGCGCGCTACGTGACCGAC 2041
Db 1983 AGTGGAGGCGCCCGACCGCAGACCAAGATCGGCAAGCGCGCTACGTGACCGAC 3259
QY 3200 ATGTAGATGGAGCAGCCCAATAGGGAACCTAAATTAGGAAAGCAGGGGTATATTACTGCA 2101
Db 3201 ATGTAGATGGAGCAGCCCAATAGGGAACCTAAATTAGGAAAGCAGGGGTATATTACTGCA 3319
QY 3260 GAGGAGGCGAAATTTGTTACTTAACTGAAACCAAAATCAGAAAGACTGAAATACAG 2161
Db 3261 GAGGAGGCGAAATTTGTTACTTAACTGAAACCAAAATCAGAAAGACTGAAATACAG 3379
QY 2102 CCATCCAGCTGGCTGCGAGGACAGCGGAGGAGTGAACATCGTGACCGCAGCCAGT 2161
Db 2103 CCATCCAGCTGGCTGCGAGGACAGCGGAGGAGTGAACATCGTGACCGCAGCCAGT 3379
QY 2162 AGCCCTGGGATCATCCAGGCGCGCAGCAGCAAGAGCAGAGCGAGCTGGTGAACGAG 2221
Db 2163 AGCCCTGGGATCATCCAGGCGCGCAGCAGCAAGAGCAGAGCGAGCTGGTGAACGAG 3439
QY 3380 ATGCTTAGGAATCATTAAGCAGCATCCAGATTAAGAGTGAATCAGAGTTAGTCAACCAA 2281
Db 3381 ATGCTTAGGAATCATTAAGCAGCATCCAGATTAAGAGTGAATCAGAGTTAGTCAACCAA 3499
QY 2282 GCATCGAGCAGCTGATCAAGAGGAGAGGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 2341
Db 2283 GCATCGAGCAGCTGATCAAGAGGAGAGGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 3559
QY 2342 TCCTGAGCGGATCGA 2357
Db 2343 TCCTGAGCGGATCGA 3575
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RESULT 4
US-09-184-418C-9
; Sequence 9, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; TITLE OF INVENTION: IMMUNODEFICIENCY VIRUS TYPE 1
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184.418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 9
; LENGTH: 8972
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=962M751.3; 137.1632.gag; 1419.4435.pol;
; OTHER INFORMATION: 4380.4958.vif; 4898.5188.vpr; 5169.7814.tat;
; OTHER INFORMATION: 5308.7938.rev; 5407.5667.vpu; 5585.8128.env;
; OTHER INFORMATION: 8130.8753.nef
US-09-184-418C-9

Query Match 46.7%; Score 1147.4; DB 4; Length 8972;
Best Local Similarity 69.3%; Pred. No. 1.5e-179;
Matches 1647; Conservative 0; Mismatches 696; Indels 32; Gaps 5;

QY 14 TGGCGGAGGCGCATGAGCCAGGCCACCGAGGCGCAACATCTGATGAGCGGCGAGCACTTCA 73
Db 1214 TGGCTGAAGCAATGAGCCAAAGTAACAATAACAATAATGATGAGAAAGCAATTTTA 1273
QY 74 AGGCGCCAGAGCGCATCATCAAGTCTTCACTCGGCGAAGAGGCGCACATCGCCGCA 133
Db 1274 AAGCCCTTAAAGAAATTTAAATGTTTCACTGTGGCAGGAAAGGCGCATATAGCAGGA 1333
QY 134 ACTCGCGCGCCCGCGCAAGAGGCGCTGCTGGAAGTGGCGAAGAGGCGCCACAGATGA 193
Db 1334 ATTGAGGCGCTTCTGGGAAAGAAAGGCTGTTGGAATGTGGAAGAGGAGGACCAAAATGA 1393
QY 194 AGGACTGACCGAGCGCGCAGGCCCAACTTCTTCCGCGAGGAGCTGCGCTTCCCGCAGGCA 253
Db 1394 AAGACTGTACTGAGAGACAGCTAA-TTTTITAGGAAATTTGGCTTCCGAGAGGG 1452
QY 254 AGGCGCGGAGTTCCTCCAGCGAGCAG-----AACCGCGCAACAGCC 295
Db 1453 AGGCGCGGAGTTCCTTTCAGACAGACGAGGCCAAGGCCACAGCCCTCCACAGCC 1512
QY 296 CCACGACCGCGAGCTGCGGCGGAGCGGCAACCCCGCAGGAGCGCGCGCGGAGC 355
Db 1513 CCACGACGAGAGCTTCAGGTTGAGGAGCAACCCCTGCGCGAGGAGGAGGAGGAGGAG 1572
QY 356 GCCAGGCGACCTGAACTTCCCGCAGATCACTTGTGCGAGCGCCCTTGTGAGCATCA 415
Db 1573 GACAAGGAACCTTAACTGCGCTCAAACTACTTTTGGCAGCGACCCCTTGTCTCAATA 1632
QY 416 AGTGGCGGCGCAGATCAAGAGGCGCTGCTGAGACACCGGCGCGCAGACACCGTGTGG 475
Db 1633 AAGTAGGGGTGAGATAAGGAGGCTCTCTTGTGATACAGGAGCAGATGATCAGATTAG 1692
QY 476 AGGAGATGAGCTCGCGGCAAGTGAAGCGCAAGATGATCGGCGCATCGCGCTTCA 535
Db 1693 AAGAAATAATTTGCCAGGAAATGGAACCAAAATGATAGGAGGAATTTGAGGTTTTA 1752
QY 536 TCAAGGTGCGCGCAGTACGACCAAGATCTCTGATCGAGATCTGCGGCAAGAGGCCATCGGCA 595
Db 1753 TCAAGTGAACAGATGATCAATACTTATAGAAATTTGTGGAAGAAAGGCTATAGTA 1812
QY 596 CCGTGTGATCGGCGCCACCCCGTGAACATCATCGGCGGCAACATGCTGACCGAGTGG 655
Db 1813 CAGTATTAGTAGGACCTACCTGTCAACATAATTTGGGAGAAATATGTTGACCGAGCTTG 1872
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QY 656 GCTGACCCCTGAACCTTCCCATCAGCCCATCAGACGCTGCGCCCTGAGAGCTGAGACCGG 715  
 DB 1873 GCTGACACTTAATTTTCCAAATTAATGCTTAATGAACTGTACAGTAATAATTAAGCCAG 1932  
 QY 716 GATGAGACGCGCCCAAGAGTGAAGCACTGCGCCCTGACCGAGGAAAGATCAAGGCCCTGA 775  
 DB 1933 GATGATGCGCCCAAGGCTCAACATATGCGCATTTGACAGAGTAATAATTAAGCATTTA 1992  
 QY 776 CCGCCATCTGCGAGAGATGAGAGAGAGGCAAGTCAACAGATCGGCCCGGAGAAC 835  
 DB 1993 CAGCATTTTGTGAAGAAATGGAAGAGAGAAATTAATAAAATTTGCGCCCTGAGAAATC 2052  
 QY 836 CCTAGACACCCCGGCTCGCCATCAAGAGAGAGACAGACCAAGTGGCGGAGAGCTG 895  
 DB 2053 CATATACACTCCAGATTTTGCATTAATAAGAGAGAGTACTTAATGAGAGAAATTTG 2112  
 QY 896 TGGACTTCGCGAGCTGAAACAAGCAGCCAGAGACTTCTGGAGAGTCACTGGGATCC 955  
 DB 2113 TTAGATTTCAGGGAAGCTCAATAAGAACTCAGAGACTTTGGGAGTCAATTAAGAAATC 2172  
 QY 956 CCGACCCCGCGGCTGAAAGAGAGAGAGCTGACCTGCTGAGAGCTGGCGAGCGCT 1015  
 DB 2173 CACACCCAGCGGGTTAAAAAGAAAAAGTCACTGACAGTACAGATGTGGGGGATGCGT 2232  
 QY 1016 ACTTCAGCGTCCCTGGAAGAGAGCTTCGCAAGTACACCGGCTCACCATCCGAGCA 1075  
 DB 2233 ATTTTCAAGTCTTTAGATGAGAGCTTCAGAGAAATTAATGATTCACCATCTCTAGTA 2292  
 QY 1076 TCAACACAGAGACCCCGGATCGCTACAGTACAGTCTGCTGCCCCAGGCGCTGAGAG 1135  
 DB 2293 TAAACATGAAACACTGGGATTAATATCAATATATATGATGCTTCCAGAGGATGAGAAAG 2352  
 QY 1136 GCAAGCCCGAGACTTCTCAGAGAGAGATGACCAAGTCTCTGAGAGCCCTTCGCGCCGCA 1195  
 DB 2353 GATCACCATCAATATTCAGAGATGATGATTAATAATCTTGAAGCCCTTTAGAGACACAA 2412  
 QY 1196 ACCCGGAGTCTGATCTCA-----GCGCCCTCTGATAGTGGGAGAGCACTTGAGA 1249  
 DB 2413 ACCGAAATTAATGATCTATCAATATATGATGATCTTGTATGATGATCTGATTTAGAA 2472  
 QY 1250 TGGGCGAGACCGCGCGCAAGATGAGAGAGTGGCGAAGCACTGCTGCGTGGGCTTCA 1309  
 DB 2473 TGGGCGAACACAGAGCAAAATTAAGAGATTAAGAGAACCACTATTGAGATGGGATTA 2532  
 QY 1310 CCAACCCCGAGCAAGAGACCCAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 1363  
 DB 2533 CTACACCAAG 2592  
 QY 1364 ACCCGCAAGTGAACCTGTCAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 1423  
 DB 2593 ATCTGACAAATTAAG 2652  
 QY 1424 ACAGACTCCAGAGAGCTGAG 1483  
 DB 2653 ATGATTAAG 2711  
 QY 1484 AGGTGGCGAGCTGTCAG 1543  
 DB 2712 AAGTAAGCAAGCTGTAACTCTTGAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2771  
 QY 1544 TGAACGAG 1603  
 DB 2772 TGAAGTGAAG 2831  
 QY 1604 ACGGCTGTAATCAAG 1663  
 DB 2832 ATGAGATTAATTAAG 2891  
 QY 1664 ACCAGTGAAG 1723  
 DB 2892 ACCAATGAGAGATTAAG 2951  
 QY 1724 CCAAGATGAG 1783

DB 2952 CAAAAATAGAGAGCTGCCACACTAATGATGTAATAACGTTAAACAGAGGCGGTGCAAAAAA 3011  
 QY 1784 TGGCATGAGAGAGATGCTGATCTGGGGCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 1843  
 DB 3012 TAGCATGAGAGAGATGATTAATGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 3071  
 QY 1844 AG 1903  
 DB 3072 AAGAAACATGGAG 3131  
 QY 1904 AGTGTGAACACCCCGGCTGAG 1963  
 DB 3132 AGTTGTTAATCTCCCGCTGTAATTAATGATGATGATGATGATGATGATGATGATGATGAT 3191  
 QY 1964 TCGGCGGAG 2023  
 DB 3192 CAG 3251  
 QY 2024 CCGGCTAG 2083  
 DB 3252 CAGGATATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3311  
 QY 2084 AG 2143  
 DB 3312 AAAAG 3371  
 QY 2144 TGTGATCAG 2203  
 DB 3372 TAGTACAG 3431  
 QY 2204 GCGAGCTGAG 2263  
 DB 3432 CAGATTAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3491  
 QY 2264 GGGTCCCGGAG 2323  
 DB 3492 GGGTCCCGGAG 3551  
 QY 2324 GATCCGAG 2386  
 DB 3552 GATCCGAG 3586

RESULT 5  
 US-09-184-418C-11  
 ; Sequence 11, Application US/09184418C  
 ; Patent No. 6492110  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Hahn, Beatrice  
 ; APPLICANT: Gao, Feng  
 ; APPLICANT: Shaw, George  
 ; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN  
 ; TITLE OF INVENTION: IMMUNODEFICIENCY VIRUS TYPE 1  
 ; FILE REFERENCE: D6287  
 ; CURRENT APPLICATION NUMBER: US/09/184,418C  
 ; CURRENT FILING DATE: 1999-11-02  
 ; NUMBER OF SEQ ID NOS: 112  
 ; SEQ ID NO 11  
 ; LENGTH: 8959  
 ; TYPE: DNA  
 ; ORGANISM: Human Immunodeficiency virus type 1  
 ; FEATURE:  
 ; OTHER INFORMATION: isolate=94IN476, 104, 138, 1613, "98g";  
 ; OTHER INFORMATION: 1418, 4428, "pol", 4361, 4939, "vif", 4879, 5169, "vpr";  
 ; OTHER INFORMATION: 5150, 7782, "tat", 5289, 7939, "rev", 5378, 5638, "vpu";  
 ; OTHER INFORMATION: 5556, 8129, "env", 8131, 8754, "net"  
 ; US-09-184-418C-11

Query Match 46.4%; Score 1140.2; DB 4; Length 8959;  
 Best Local Similarity 69.2%; Pred. No. 2.2e-178;  
 Matches 1632; Conservative 0; Mismatches 708; Indels 17; Gaps 5;



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Db      3371 ATGCAATGAATCATCTTCAAGCAACAACGATAAAGTGAATCAGATTAGTCAACCAA 3430
QY      2222 TCATGAGCAGCTGATCAAGAGAGAGAGTGTACCTGAGCTGGTGCCTCCCAAGG 2281
Db      3431 TATATGACATTAATTAACAAAGAAAGTCTATCTGTCACTGGTACCAGACATTAAG 3490
QY      2282 GCATGCGCGGCAACGACGATCGAACGCTGTGACGAAGGCAATCCGCAAGTGTGT 2341
Db      3491 GAATGGAGGGAATGAACAAGTAGATAGTATAGTAGTGAATTAGGAAGTACTGT 3550
QY      2342 TCCTGAGCGCATTCAT 2358
Db      3551 TTCTGATGTGATAGAT 3567

RESULT 6
US-09-184-418C-4
; Sequence 4, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Hahn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; TITLE OF INVENTION: IMMUNODEFICIENCY VIRUS TYPE 1
; FILE REFERENCE: D6287
; CURRENT APPLICATION NUMBER: US/09/184,418C
; CURRENT FILING DATE: 1999-11-02
; NUMBER OF SEQ ID NOS: 112
; SEQ ID NO 4
; LENGTH: 8992
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=92RM09; 139.1624; gag; 1690.4428; pol (N-terminus uncertain
; OTHER INFORMATION: 4373.4951; vif; 4891.5181; vpr; 5162.7801; tat; 5301.7958; rev;
; OTHER INFORMATION: 5403.5648; vpu; 5566.8148; env; 8150.8773; nef
; US-09-184-418C-4

Query Match      45.5%; Score 1116.8; DB 4; Length 8992;
Best Local Similarity 68.3%; Pred. No. 1.5e-174;
Matches 1612; Conservative 0; Mismatches 732; Indels 16; Gaps 4;

QY      14 TGGCCGAGGCATGAGCCAGCCAGCCGCAACATCTGTATGACGCGACAACTTCA 73
Db      1221 TGGCTGAAGCAATGAGCCAGTACAAACCAACATATGATGACGAGGCAATTTTA 1280
QY      74 AGGCGCCCAAGGCGCATCACTGCTTCACTGCGGCAAGAGGCGCCATCGCCGCA 133
Db      1281 AGGCGCCAGAAAGAAATTATTAAGTGTTCACCTGTGGCAAGAGACACTAGCCAGAA 1340
QY      134 ACTGCGCGCGCCCGCAGAAAGGCTGTGGAAGTCCGCGCAAGAGGCGCCACAGATGA 193
Db      1341 ATTGAGAGGCGCCCTTGAAGAAAGAGGCTGTGGAATGTGGAAGAGGAGACACCAATGA 1400
QY      194 AGACTGCACCGAGCGCCAGCCCACTTCTCCGCGAGGACCTGTGCTTCCCGCAGGCA 253
Db      1401 AAGACTGCACCTAGAGACAGGCTTAA-TTTTITAGGGAATAATTGGGCTTCCAACAAGGG 1459
QY      254 AGGCGCGGAGTTTCCCGCAGCGAGAACCGGCGCAAGCCCGACCGCGAGCT-- 311
Db      1460 AGGCGAGAAATTTTCCCGCAGAGACTGTGAGCCCAACGCCCCCAGCAAGCAAGAACTTT 1519
QY      312 -GCAGGTGCGCGCAGCAACCCCGCAGCGAGGCGCGCCGAGCGCCAGGCGCACTCTGA 370
Db      1520 GGAATGGGGGAAGAGATACCTCTCTCTGAAACAGAGACAGAAAGACGGGAACCTTTA 1579
QY      371 ACTTCCCCCAGATCACTCCTGTGGCAGCGCCCTCTGTGTGACATCAAGGTGGCGGCGAGA 430
Db      1580 ATTTCCTCAATCACTCTTTTGGCAACGACCCCTTGTCAAGTAAATAATAGAGGTGACG 1639
QY      431 TCAAGAGGCGCTGTGCGACACCGGCGCGAGACACCGTGTGTGAGAGGATGAGACCTGC 490

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Db      1640 TAAAGAAAGCTTATAGATACAGAGCAGATGATATACATATTAAGAAATAATTTGC 1699
QY      491 CCGGCAATGGAGCCCAAGATGATTCGCGGCAATCGCGGCTGATCAAGTGGCGAGT 550
Db      1700 CAGAAATGGAAACCAAAATGATAGGGGAATTGAGGTTTATCAAGGTAAACAGT 1759
QY      551 ACGACAGATCCTGATGAGATCTGCGGCAAGAGGCAATCGGACCGTGTGTATCGGC 610
Db      1760 ATGATCAAAATCTTATAGAAATTTGTGAAAATAAGGCTATATGATACATATTAATGAGAC 1819
QY      611 CCACCCCGTGAATCATCTGCGCGCAACATCTGTACCCAGCTGGCTGACCTGAACT 670
Db      1820 CTACATCTGTCAACATATGGAAGAAATATGTTGACCCAGATGTGTACTTAAACT 1879
QY      671 TCCCATCAGCCCATGAGAGCGGTGCGCCGTAAGCTAAGCCCGGATGAGACGCCCA 730
Db      1880 TTCCAAATTAGTCTTATGAGACTGTACAGTAGCATTTAAACCGAAGATGATGCCCA 1939
QY      731 AGTGAAGCAGTGGCCCCCTGACCGAGAGAGATCAAGGCCCTGACCGCCATCTGCGAG 790
Db      1940 AGGTTAAACATGGCCATGTACAGAGAAATAAATAAGCATTTAAGAAATTTGTACAG 1999
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Db      2000 AAATGGAATAAGAGGGAATAATTTCAAAAATCGGGCTGAAAATCCATATTAACCTCCAG 2059
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Db      2060 TATTTGCCATTAATAAAGAGACAGTACTAATGAGAAATTTGTAGATTTCCAGGAGAC 2119
QY      911 TGAACAAGCGCACCCAGAGACTTCTGGAGGTGACAGCTGGGCAATCCCCACCCCGCGGC 970
Db      2120 TCAACAATAAGAACTCAAGACTTTTGGGAATGCCAATTAGGATACCAACCCAGAGGCT 2179
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QY      1031 TGAACGAGAGCTTCCGCAAGTACACCGGCTTCAACATCCCGAGATCAACAAGAGACCC 1090
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QY      1091 CCGGATTCGCTACAGTACAACTGCTGCTCCCAAGGCTGGAAGGCGACGCCAGACTCT 1150
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QY      1325 AGCAACGAGAGAGAGCCCGCTTCCGCGCAT-----GAACTGACCCCGCAAGAGTGA 1378
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QY      1439 TGTGGGCACTGAACTGGGCGACAGATCTAACCCCGCATCAAGGTGGCGCACTGT 1498
Db      2660 TAGTGGGAAATTAACCTGGGCAAGTCAAGTTTACCAAGGGGTAAAGTTAAGGCAATGT 2719
QY      1499 GCAAGCTGCTGGGCGCGCCAGGCGCTGACCGGACATGTGTCCCTGTACCGAGAGGCG 1558
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Db TGTCTGTGATGGAATAGAT 3579
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## RESULT 7

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US-09-117-217-7
; Sequence 7, Application US/09117217
; Patent No. 6221578
; GENERAL INFORMATION:
; APPLICANT: de BETHUNE, Marie-Pierre
; APPLICANT: HERTOGS, Kurt
; APPLICANT: PAUWELS, Rudi
; TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE
; TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY
; TITLE OF INVENTION: OF HUMAN HIV STRAINS
; FILE REFERENCE: 1377-125P
; CURRENT APPLICATION NUMBER: US/09/117,217
; CURRENT FILING DATE: 1998-07-24
; NUMBER OF SEQ ID NOS: 15
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; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 7
; LENGTH: 2601
; TYPE: DNA
; ORGANISM: HIV-HXB2
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1)..(492)
; OTHER INFORMATION: gag Polyprotein
US-09-117-217-7

Query Match 44.0%; Score 1081.6; DB 3; Length 2601;
Best Local Similarity 67.9%; Pred. No. 7.6e-169;
Matches 1610; Conservative 0; Mismatches 734; Indels 28; Gaps 6;

Qy 14 TGGCGAGCGGCATGAGCCAGGCCACCA--GGGCCAACATCTCTGATGAGCGCAGCAACT 70
Db 77 TGGCTGGAAGCAATGAGCCCAAGTAACAAATTCAGCTACCATATGATGATGAGAGGCAATT 136
Qy 71 TCAAGGGCCCCAAGCGCATCATCAAGTCTTCAACTGGCGCAAGGAGGCGCCACATCGCCC 130
Db 137 TTAGGAACCAAGAAAGATTGTTAAGTGTTCATTTGTCGCAAGAGGGCACACAGCCA 196
Qy 131 GCAACTGCGCGCCCCCGCCCAAGAGGCTGCTGGAAGTGGCGCAAGGAGGCCACACAGA 190
Db 197 GAAATTGCGAGGGCCCCCTAGGAAAGAGGCTGTTGGAAATGTGAAAGGAAGGACACCAA 256
Qy 191 TGAAGACTGCACCGAGCGCCAGGCCCAACTTCTCCGGAGGACCTGGCTTCCGCCAGG 250
Db 257 TGAAGATTGTACTTGAGAGACAGGGCTAA-TTTTATAGGGAAGATCTGSCCTTCTTACAAG 315
Qy 251 GCAAGGCCCGCGAGTTCCCGAGCAGAGAGAACCGCGCAACAGAGCCCGCCAGCGCGAGC 310
Db 316 GGAAGGCCAGGGAATTTTCTCAGAGCAGACCGAGAGCCACAGCCCCCAGCAAGAGAGC 375
Qy 311 TGCAGTTCGCGGG-----CGAACACCCCGCAGCGCGCGCGCGCGCGCGCGCGCGCGCA 364
Db 376 TTCAGTCTGGGTAGAGACAACAACTCCCTCTAGAGAGAGGAGCCGATAGACAGGAA 435
Qy 365 -----CCTGAACTTCCCGCAGATCACTCTGTGGCAGCGCGCGCGCGCGCGCGCGCGCG 418
Db 436 CTGTATCTTTAACTTCCCTCAGGTCACTCTTTGGCAACGACCCCTCGTCAATAAAGA 495
Qy 419 TGGCGGCGCAGATCAAGAGGCGCTCTGAGACACCGCGCGCGCGCGCGCGCGCGCGCGCG 478
Db 496 TAGGGGGCACTAAAGAGGCTCTATTAGATACAGGAGCAGATGATACAGTATTAGAG 555
Qy 479 AGATGAGCCTCCCGGCAAGTGGAAAGCCCAAGATGATCGGGGCGCATCGCGGCTTCATCA 538
Db 556 AAATGAGTTTGCAGGAAGATGGAAACCAAAATGATAGGGGGAATTGGAGGTTTTATCA 615
Qy 539 AGGTGCGCGATGACGACGAGATCTGATCGAGATCTGCGGCAAGAGGCCATCGGCACCG 598
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Qy 599 TGCTGATCGCGCCACCCCGTGAACATCATCGGCGCAACATGCTGACCCAGCTGGGCT 658
Db 676 TATTAGTAGACCTACACCTGTCAACATAANTGGAGAAATCTGTTGACTCAGATTGTT 735
Qy 659 GCACCTGAACTTCCCATCAGCCCATCGAGACCGTCCCGTGAAGCTGAAGCCCGGCA 718
Db 736 GCACCTTTAAATTTCCCATTAGCCCTATTGAGACTGTACCAAGTAAATAAAGCCAGGAA 795
Qy 719 TGGACGGCCCCAAGGTGAGCAGTGGCCCTGACCGGAGGAAGATCAAGGCCCTGACCG 778
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 Db 1216 CACGAGCAATATTCAAAGTACATGACAAAATCTTAGAGCTTTTGAAGAAAGAAATC 1275  
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 Db 2416 TCAGGAAGTACTATTTTATGATGGAATAGAT 2447

RESULT 8  
 US-09-117-217-9  
 ; Sequence 9, Application US/09117217  
 ; Patent No. 6221578  
 ; GENERAL INFORMATION:  
 ; APPLICANT: de BETHUNE, Marie-Pierre  
 ; APPLICANT: HERTOGS, Kurt  
 ; APPLICANT: PAWELIS, Rudi  
 ; TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE  
 ; TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY  
 ; FILE REFERENCE: 1377-125P  
 ; CURRENT APPLICATION NUMBER: US/09/117,217  
 ; CURRENT FILING DATE: 1998-07-24  
 ; NUMBER OF SEQ ID NOS: 15  
 ; SOFTWARE: PatentIn Ver. 2.0  
 ; SEQ ID NO 9  
 ; LENGTH: 2601  
 ; TYPE: DNA  
 ; ORGANISM: HIV-HXB2  
 ; FEATURE:  
 ; NAME/KEY: CDS  
 ; LOCATION: (334)..(489)  
 ; OTHER INFORMATION: gsg P6 (52 AA)  
 US-09-117-217-9

Query Match 44.0%; Score 1081.6; DB 3; Length 2601;  
 Best Local Similarity 67.9%; Pred. No. 7,6e-169;  
 Matches 1610; Conservative 0; Mismatches 734; Indels 28; Gaps 6;

QY 14 TGGCGAGGCGCATGAGCCAGGCGCAACA--GCGCAACATCTTATGTAGCGGCAAGCAACT 70  
 Db 77 TGGGTGAAGCAATGAGCCAGTAACTCAATTCAGCTACATATGATGAGAGGCAATTT 136  
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2416 TCAGGAAAGTACTAATTTTTTAGATGGAATAGAT 2447

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599 TGTGTATGCGCCCAACCCCGTGAACATCATCGCGCCGAACATGCTGACCGAGCTGGGT 658  
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736 GCACTTTAAATTTCCCATAGCCCTATTGAGACTGTACAGTAAATTAAGCCAGGAA 795  
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1253 GCAGACCGCGCAAGATCAGAGAGCTGGCAGCAACCTGCTGCGCTGGGCTTCACCA 1312



## RESULT 9

US-09-117-217-11

; Sequence 11, Application US/09117217

; Patent No. 6221578

; GENERAL INFORMATION:

; APPLICANT: de BETHUNE, Marie-Pierre

; APPLICANT: HERROGS, Kurt

; APPLICANT: PAUMELS, Rudi

; TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE

; TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY

; FILE REFERENCE: 1377-125P

; CURRENT APPLICATION NUMBER: US/09/117,217

; NUMBER OF SEQ ID NOS: 15

; SOFTWARE: Patent In Ver. 2.0

; SEQ ID NO 11

; LENGTH: 2601

; TYPE: DNA

; ORGANISM: HIV-HXB2

; FEATURE:

; NAME/KEY: CDS

; LOCATION: (453)..(749)

; OTHER INFORMATION: Protease

US-09-117-217-11

Query Match 44.0%; Score 1081.6; DB 3; Length 2601;

Best Local Similarity 67.9%; Pred. No. 7,6e-169;

Matches 1610; Conservative 0; Mismatches 734; Indels 28; Gaps 6;

QY 14 TGGCCGAGGACATGAGCCAGGCCA---GGCCCAATCTGTATGACGACGCAACT 70  
 DB 77 TGGCGAGGCAATGAGCCCAAGTAACAATTCAGCTACATATGATGAGAGGCAATT 136  
 QY 71 TCAGAGGCCCAAGGCAATCATCAAGTCTCACTGCGGCAAGAGGCGCAATGCGCC 130  
 DB 137 TTAGAGCAACAAAGAGAGATTGTTAGTTCATTTGCGCAAGAGAGGCGCACAGCCA 196  
 QY 131 GCAATGCGCGCGCGCGCGCGAGAGAGGCTGTGAAGTGTGCGCAAGAGGCGCCACCGA 190  
 DB 197 GAAATGAGGCGCGCGCGCGCGAGAGAGGCTGTGAAGATGTGAAGAGAGACACAAA 256  
 QY 191 TGAAGACTGCAACCGAGCGCGAGCCAACTTCTCCGAGAGACCTGCGCTTCCCGCAG 250  
 DB 257 TGAAGATTTGATGAGAGACAGGCTAA-TTTTAAAGGAATGTGGCTTCTACAG 315  
 QY 251 GCAAGCGCGCGAGTTCGCCAGCGAGACGACCGCGCAACAGCCCGACAGCGCGAGC 310  
 DB 316 GAAAGCGCGAGATTTTCTTCAGAGCAGACCAAGCCCAACAGAAAGAGAGC 375  
 QY 312 TGAGAGTGGCGG-----CGACAACCCCGGAGAGAGCGCGCGCGCGCGCGCA 364  
 DB 376 TTCAAGTCTGGGATGAGACAACTCCCTCAGAGAGAGAGCGAGTGAACAGAGA 435  
 QY 365 -----CCTGAACCTTCCCGAGATCACTGTGCGAGCGCGCGCGTGTGAGCATCAAG 418  
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 QY 419 TGGCGCGCGAGATCAAGAGGCGCTGTGAGACACCGCGCGCGAGACACCGTGTGAGG 478  
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 QY 419 AGATAGGCTGTCCCGGCAAGTGAAGCCCAAGATGATGCGCGGCAATCGCGGCTTCATCA 538  
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 QY 539 AGGTCCGCGAGTACACAGATCTGATGAGATCTGCGCGCAAGAGCGCATCGGACCG 598  
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 QY 719 TGAAGCGCCCAAGTGAAGCAGTGGCGCGTGAACCGAGAGAGATCAAGGCGCTGACCG 778  
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 QY 1313 CCGCGAG 1366  
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 DB 1456 CTGATTAATGAG 1515  
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 DB 1636 CAG 1695  
 QY 1607 GCGTGTACTAG 1666  
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 QY 1667 AGTGAAGTCTACAGATCTACAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 1726

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## RESULT 10

US-09-117-217-13  
; Sequence 13, Application US/09117217  
; Patent No. 6221578  
; GENERAL INFORMATION:  
; APPLICANT: de BETHUNE, Marie-Pierre  
; APPLICANT: HERTOGS, Kurt  
; APPLICANT: PAUWELS, Rudi  
; TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE  
; TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY  
; TITLE OF INVENTION: OF HUMAN HIV STRAINS  
; FILE REFERENCE: 1377-125P  
; CURRENT APPLICATION NUMBER: US/09/117,217  
; CURRENT FILING DATE: 1998-07-24  
; NUMBER OF SEQ ID NOS: 15  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 13  
; LENGTH: 2601  
; TYPE: DNA  
; ORGANISM: HIV-HXB2  
; FEATURE:  
; NAME/KEY: CDS  
; LOCATION: (750)...(2435)  
; OTHER INFORMATION: Reverse Transcriptase

US-09-117-217-13

Query Match 44.0%; Score 1081.6; DB 3; Length 2601;  
Best Local Similarity 67.9%; Pred. No. 7,6e-169;  
Matches 1610; Conservative 0; Mismatches 734; Indels 28; Gaps 6;  
QY 14 TGGCGAGCCATGAGCCAGGCCACCA---GGCCCAACATCTCTGATGCGAGCGCAGCAACT 70  
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QY 419 TGGCGCGCCAGATCAAGGAGGCGCTCTGTGACACCGCGCGCGACACACCTGCTGAGG 478  
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QY 539 AGGTGCGCCAGTACGACAGATCCTGATCGAGATCTGCGGCAAGAGGCGCATCGGACCG 598  
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Db 676 TATTAGTAGGACCTACACCTGTCAACATAAATTTGGAAGAAATCTGTTGACTCAGATTGGT 735  
QY 659 GCACCTGAACCTTCCCATCAGCCCATCGAGACCGTGCCTGAGCTGAAAGCCCGCA 718  
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QY 719 TGGAGGCCCCAAGGTGAAGCAGTGGCCCTGACCGAGGAGAGATCAAGGCGCTGACCG 778  
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Db      1156  ACAAATGAGACACAGGGATTAATACATACAGATGCTTCACAGGGATGGAAGGAT 1215
Qy      1139  GCCCGAGCATCTTCCAGAGCAGACATGACCAAGATCCTGAGGCCCTTCCGCGCGCAAC 1198
Db      1216  CACCGACAATATTCGAAGTACAGACAAAATCTTGAAGCTTTTGAAGAAACAAATC 1275
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Qy      1253  GCGAGCACCGGCGCAGAGTCGAGGAGCTGCGACACACTGTGTGGCTGGGGCTTACCA 1312
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Qy      1313  CCCCCGACAGAGCAGCAGAGAGAGCCCCCTTCTGCCCCAT-----CGAGCTGACC 1366
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Qy      1367  CCGACAATGGAACCTGACGCCATCGAGCTGCCGAGAGAGAGCTGAGACCTGAAACG 1426
Db      1456  CTGATTAATGACAGATACAGCCTTAATGCTGCCGAGAAAGACAGCTGAGCTGCAATG 1515
Qy      1427  ACATCCAGAGCTGTGGGCAAGCTGAACTGGGCGCAGCAGATCTACCCCGGATCAAG 1486
Db      1516  ACATCCAGAGATTAATGGGGAATGATGAGTGGCAAGTCAAGTTTACCAGGATTAAG 1575
Qy      1487  TGCGCAGCTGTGCAAGCTGTGCGCGGCGCCAGAGCCCTGACCGACATCTGTCCCTGA 1546
Db      1576  TAAGCAATTTATGTAACTCTTAAAGAGAACCAAGCACTAACAGAAATATACACTAA 1635
Qy      1547  CCGAGAGGCGGAGCTGAGCTGGCGCGAGAACCGGAGATCCTGCGCGAGCCGCTGACG 1606
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Qy      1607  GCGTGTACTACGACCCCGCAGAGAGCTGTGTGGCGAGATCCAGAGAGAGGCGCCGAGC 1666
Db      1696  GAGTGTATTAAGACCCATCAAAAAGCTTAAATGAGCAATACAGAGAGAGGCGAGGCGC 1755
Qy      1667  AGTGAAGCTTACAGATCTTACAGAGAGCCCTTCAAGACCTGAAAGCCGCGCAAGTACG 1726
Db      1756  AATGACATATCAATTTATCAAGAGCCATTTAAATCTGAAACAGAAATATGCA 1815
Qy      1727  AGATGCGCACCGCCCAACCAAGACGTGAGAGAGCTGACCGAGGCGCTGCAAGAGATCG 1786
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Qy      1787  CCATGAGAGAGATGATCTGAGGCGAGAGACCCCAAGTCCGCTGTGCCATCCAGAGAG 1846
Db      1876  CCACGAGAGAGATGATTAATGAGGGAAGAGCTCCATTAATTTAAATGCGCCATACAAAG 1935
Qy      1847  AGACCTGGGAGACTGTGTGACCGACTACTGAGAGGCACTGTGATCCCGAGTGGAGT 1906
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Db      1996  TTGTTAATACCTCTCCCTTAAGTAATATGATGTAATGATGAGAGAAACCCATGATAG 2055
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Db      2056  GAGCAGAAACCTTCTATGTATGATGAGGAGAGCTAACAGGAGACCTAAATTTAGAAAGAG 2115
Qy      2027  GCTACGTGACCGAGCCGGGGCGGAGAAATCTGTAGGCTTACCGAGACCAACCAACGA 2086
Db      2116  GATATGTACTAATAAGAGAGACAAAGATTTGCACTTAATGACACACATCAATCGA 2175
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Qy      2207  AGCTGTGAACCAATATCATGAGCAGCTGATCAAGAGAGAGAGTATCCTGAGCTGAG 2266
Db      2296  AGTATGTCATCAATATATAGAGAGATTAATTAAGAAAGAGAGTCTATCTGGCATGCG 2355
Qy      2267  TGCCCCCGCACAGGGGATCGGCGCAACGAGAGATGACAGACTGTGTGACAGAGCA 2326
Db      2356  TACGAGACACAAAGAAATGAGAGAAATGAACAAGTATGAATTAATGATGATGCTGAA 2415
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RESULT 11
us-09-735-487-7
; Sequence 7, Application US/09735487
; Patent No. 6528251
; GENERAL INFORMATION:
; APPLICANT: de BETHUNE, Marie-Pierre
; APPLICANT: HERTOGS, Kurt
; APPLICANT: FAUMELS, Rudi
; TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE
; TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY
; TITLE OF INVENTION: OF HUMAN HIV STRAINS
; FILE REFERENCE: 1377-125P
; CURRENT APPLICATION NUMBER: us/09/735,487
; PRIOR FILING DATE: 2000-12-14
; PRIOR APPLICATION NUMBER: 09/117,217
; PRIOR FILING DATE: 1998-07-24
; NUMBER OF SEQ ID NOS: 15
; SOFTWARE: Patentln Ver. 2.0
; SEQ ID NO 7
; LENGTH: 2601
; TYPE: DNA
; ORGANISM: HIV-HXB2
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1)..(492)
; OTHER INFORMATION: gag Polyprotein
us-09-735-487-7

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Query Match      44.0%; Score 1081.6; DB 4; Length 2601;
Best Local Similarity 67.9%; Pred. No. 7.6e-169;
Matches 1610; Conservative 0; Mismatches 734; Indels 28; Gaps 6;

Qy      14  TGGCGGAGGCGCATAGGCGAGGCCACCA---GGCGAACATCTGATGCAAGCGCAACT 70
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Qy      131  GCAACTCGCGGCCCGCCGDAAGAGGCTGTGGAAGTGTGCGCAAGAGAGGCGCCACGA 190
Db      197  GAAATTCAGAGGCGCCCTTAGAGAAAGAGGCGTGTGAAATGTGAAAGAGAGACACAAA 256
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Qy      251  GCAAGCGCCGAGATTCCCGAGGAGAGACCGCGCAACAGCCCAAGCCGAGAGC 310
Db      316  GGAAGGCGAGGAGATTTTCTTCAGAGCAGACAGAGCAACAGCCCGCACAGAAAGAGC 375
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 Qy 1727 AGATGGCAGCCGCCACACCAACGACGTGAAGCAGCTGACGAGCCGTGCGAAGATCG 1786  
 Db 1816 GAATGAGGGGTGCCACACATTAATGATGTAAACAATTAACAGAGCAGTGCAAAAATAA 1875  
 Qy 1787 CCATGAGAGCATCTGTGATCTGGGCGAGACCCCAAGTTCCCGTCCCATCCAGAGG 1846  
 Db 1876 CCACAGAAAGCATAGTAATATGGGAAAGACTCTTAATTTAACTGCCCATACAAAAG 1935  
 Qy 1847 AGACCTGGGAGACCTGTGTGACCGACTACTGTGAGCCACCTGGATCCCGAGTGGAGT 1906  
 Db 1936 AAACATGGGAAACATGTTGGACAGAGTATTGCAAGCCACCTTGGATTCTTGTAGTGGAGT 1995  
 Qy 1907 TCGTGAACACCCCGCTTGTGTGAAGCTGTGTGACAGCTGGAGAGGAGCCCATCATCG 1966  
 Db 1996 TTGTTAATAACCCCTCCCTTAGTGAATATGTTACAGTTAGAGAAAGAACCCATAGTAG 2055  
 Qy 1967 GCGCGAGACCTTCTACGTGGAGCGCGCCCAACCGGAGACCAAGATCGGCAAGGCCG 2026  
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 Db 2116 GATATGTTACTTAATAGAGAGACAAAAGTTGTACCCCTAATCTGACACAAATCAGA 2175  
 Qy 2087 AGACGAGCTGAGCCCATTCAGCTGGCCCTCAGAGACGCGGACGAGGTGAACATCG 2146  
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 Qy 2147 TGACCGACAGCCAGTACGCCCTGGGCATCATCCAGCCCGAGCCCGACAGAGGAGCG 2206  
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 Db 2296 AGTTAGTCAATCAATATAGAGAGTTAATAAAAGAGAAAGTCTATCTTGGCATGG 2355  
 Qy 2267 TGC CGCCCAAGAGGCTATCGCGGCAACAGCAGATCGAAGCTGTGTAGCAAGGCA 2326  
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 Db 2416 TCAGAAAAGTACTATTTTGTAGTGAATAGAT 2447

RESULT 12  
 US-09-735-487-9  
 ; Sequence 9, Application US/09735487  
 ; Patent No. 6528251  
 ; GENERAL INFORMATION:  
 ; APPLICANT: de BETHUNE, Marie-Pierre  
 ; APPLICANT: HERTOGS, Kurt

/ APPLICANT: PAUMELS, Rudi  
 / TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE  
 / TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY  
 / TITLE OF INVENTION: OF HUMAN HIV STRAINS  
 / FILE REFERENCE: 1377-125P  
 / CURRENT APPLICATION NUMBER: US/09/735,487  
 / CURRENT FILING DATE: 2000-12-14  
 / PRIOR APPLICATION NUMBER: 09/117,217  
 / PRIOR FILING DATE: 1998-07-24  
 / NUMBER OF SEQ ID NOS: 15  
 / SOFTWARE: Patent In Ver. 2.0  
 / SEQ ID NO: 9  
 / LENGTH: 2601  
 / TYPE: DNA  
 / ORGANISM: HIV-HXB2  
 / FEATURE:  
 / NAME/KEY: CDS  
 / LOCATION: (334)..(489)  
 / OTHER INFORMATION: gag p6 (52 AA)  
 US-09-735-487-9

Query Match 44.0%; Score 1081.6; DB 4; Length 2601;  
 Best Local Similarity 67.9%; Pred. No. 7.6e-169;  
 Matches 1610; Conservative 0; Mismatches 734; Indels 28; Gaps 6;

QY 14 TGGCCGAGGCGCATGAGCCGACCA--GCGCCACATCCTGATGACGCGCAACT 70  
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 Db 137 TTAGAACCCAAAGAAAGATTGTAAGTGTTCATTTGTGCAAGAGAGGGGCAACAAGCA 196  
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 QY 191 TGAAGACTGACCGAGCGCCAGGCGCACTTCTCCGCGAGAGACCTGCGCTTCCCCAG 250  
 Db 257 TGAAGATTGTACTGAGAGACAGGCTAA-TTTTAAAGGAAAGATCTGCGCTTCTTAACAG 315  
 QY 251 GGAAGCGCCGCGAGTTCCCCAGCGAGAGAACCGCGCCCAACGCCCCACAGCGCGAGC 310  
 Db 316 GGAAGCGCCAGGGAATTTTCTTCAAGAGAGACAGAGCCCAAGCCCCCAAGAAAGAGC 375  
 QY 311 TGCAGGTGCGCGG-----CGACAAACCCCGCAGCGAGCGCGCGCGCGCGCGCGCA 364  
 Db 376 TTCAAGTCTGGGGTGAAGACAACTACCTCCCTCAGAGACAGAGCCGATAGACAGAA 435  
 QY 365 -----CCTGAACCTTCCCCAGATCAACCTGTGGAGCGCGCCCTGTGAGCATCAAG 418  
 Db 436 CTGTATCCTTTAACTTCCTCAGGTCACTTTGGGAAGACCCCTCGTCAATTAAGA 495  
 QY 419 TGGGGGCGCAGATCAAGAGAGCGCTGCTGAGAACCGCGCGCGCGCAACACCGTCTGAG 478  
 Db 496 TAGGGGGGCACTAAAGGAAGCTCTATTAGATACAGAGCAGATGATACAGATTAGAG 555  
 QY 479 AGATAGGCTGCGCGCGCAAGTGAAGCCCAAGATATCGCGGCAATCGCGGCTTCATCA 538  
 Db 556 AAATAGATTGCGCAGAGAGATGAGAACCAAAATGATAGGGGGAATTGAGGTTTATCA 615  
 QY 539 AGGTGCGCCAGTAGACACAGATCTGATGAGATCTGCGGCAAGAGGCGCATGCGACCG 598  
 Db 616 AAGTAAGACAGTATATCATGATCATGAGTAATCTGTGACATTAAGCTATAGGTACAG 675  
 QY 599 TGCTATGCGT 658  
 Db 676 TATTATGAGACCTTCACTGCAATATTTGAAAGAAATCTGTGATCTGATTTGTT 735  
 QY 659 GCACCCCTGAATTCCTCATCAGCGCCCATGAGACCGTGCCTGAGCTGAAGCGCGCA 718  
 Db 736 GCACCTTAAATTTTCCCATAGCCCTATTGAGACCTGTACAGTAAATTTAAAGCGAGAA 795

QY 719 TGAAGCGCCCGCAAGGTGAGCAGTGGCCCTGACCGAGAGAGATCAAGCCCTGACCG 778  
 Db 796 TGGATGGGCCAAAGTTTAACATGGCCATTGACAGAAAGAAATTAAGCATTTAGAG 855  
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 QY 899 ACTTCGCGAGCTGAACAGCGCACCCGACCTTCTGGAGGTGAGCTGGGCATCCCC 958  
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 Db 1096 TTCAAGTCCCTTGAAGAGAGCTTCAAGAGTACTGAGATTTACATACCTAGTATPA 1155  
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 Db 1156 ACAATGAGACACAGAGGATTGATATGAGTACAGTACAGTCTTCCACAGGAGATGAAAGAT 1215  
 QY 1139 GCCCGAGCTTCTCAAGCAGTACCAAGATCTGAGCCCTTCCGCGCGCGCAAC 1198  
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 QY 1199 CCGAGATGATATACCA-----GGCCCCCGTGTGTTGGGAGCGACCTGAGATG 1252  
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 Db 1396 CACGAGCAAAACATCAGAAAGACCTTCATCTTGTGATGGGTATTAACCTCAC 1455  
 QY 1367 CCGCAAGTGAACGCTGAGCGCATGAGCTGCGCGAAGAGAGAGTGAACCGGAAAG 1426  
 Db 1456 CTGATTAATGACAGTACAGCTTATGCTGCTGCGCGAAGAAAGACAGCTGACGTGCAATG 1515  
 QY 1427 ACATCCAGAGCTGTGGGCAAGCTGAACCTGGGCGAGCAGATCTACCCGCGCATCAAG 1486  
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 QY 1487 TGCCTCAGCTGTGAAGTGTGTGGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 1546  
 Db 1576 TAAAGCAATTTATGTAACCTCTTGAAGAGAACAAAGACCTTAACAGAAATTAACCACTPA 1635  
 QY 1547 CCGAGAGGCGGAGCTGAGCTGCGCGAAGAACCCGAGATCTCTGCGCGAGCGCGCGCG 1606  
 Db 1636 CAGAAAGAGAGAGCTGAGAACTGCGACAGAAACAGAGATTTCTAAAGAACAGTACATG 1695  
 QY 1607 GCGTGTACTGACCCCGACGAGAGACCTGTGGCGGAGATCCAGAGAGGCGCAAGACC 1666  
 Db 1696 GAGTGTATTATGACCCCATCAAAAGACTTAATAGAGAAATCAAGAGAGGCGCAAGGCC 1755  
 QY 1667 AGTGAACCTACAGATCTACAGAGAGCGCTTCAAGAACCTGAAGACCGCGCAAGTACGCA 1726  
 Db 1756 AATGACATATCAATTTATTAAGAGCCATTTAAATCTGAAACAGAGAAATTAAGTGA 1815  
 QY 1727 AGATGCGACCGCGCACACCAAGCAGCTGAAGCAGCTGACCGAGCGCTGAGAGAGATCG 1786  
 Db 1816 GAATGAGGGGCGCGCACATTAATGATGATTAACATTAACGAGGCGAGTGAAGAAATTA 1875  
 QY 1787 CCAATGAGAGCATGTGATCTGGGGCAAGACCCCGAAAGTTCCGCTGCGCATCAAGAG 1846

Db 1876 CCACAGAAACCATAGTAATATGGGAAAGACTCTCTAAATTTAAACTGCCCATACAAAGG 1935  
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QY 1907 TCGTGAACACCCCCCTCTGGTGAAGCTGTGGTACCACTGGAGAGGACCCATCATCG 1966  
Db 1996 TTGTTAATACCCCTCTCTAGTGAATATGGTACCACTGGAGAAAGACCCATAGTAG 2055  
QY 1967 GCCTGGAGACCTTCTAGTGGAGCGGCCGCAACCGCGAGACCAAGATCGGCAAGCCCG 2026  
Db 2056 GAGCAGAAACCTTCTATGTAGATGGGCAGCTAACAGGGAGACTAAATTAGGAAAGCAG 2115  
QY 2027 GCTACGTGACCGACCGGGCGGCGAGAGATCTGTAGCCTGACCGAGCAACCAACCCAGA 2086  
Db 2116 GATATGTTACTAATAGAGGAGACAAAGAGTTGTACCCCTAACTGACACAAACATAGA 2175  
QY 2087 AGACCGAGCTGCGAGGCCATCCAGCTGGCCCTGAGGACAGCGGCGAGAGGAGCGG 2146  
Db 2176 AGACTAGTTACAGCAATTTATCTAGCTTTGAGGATTCGGGATTAGAGTAAACATAG 2235  
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Db 2236 TAACAGACTCACAAATATGCAATTAGGAATCAATCAAGCACAACCCAGATCAAGTGAATCAG 2295  
QY 2207 AGCTGTGTGAACCAAGATCATCGACGAGCTGATCAAGAGGAGAGAGTCTACTGAGCTGG 2266  
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QY 2327 TCGCAGAGTGTCTTCTCGACGGCATCGAT 2358  
Db 2416 TCAGGAAGACTACTATTTTAGATGGAATAGAT 2447

## RESULT 13

US-09-735-487-11  
; Sequence 11, Application US/09735487  
; Patent No. 6528251  
; GENERAL INFORMATION:  
; APPLICANT: de BETHUNE, Marie-Pierre  
; APPLICANT: HERTOGS, Rudi  
; APPLICANT: PAUWELS, Rudi  
; TITLE OF INVENTION: METHOD OF MANAGING THE CHEMOTHERAPY OF PATIENTS WHO ARE  
; TITLE OF INVENTION: HIV POSITIVE BASED ON THE PHENOTYPIC DRUG SENSITIVITY  
; FILE REFERENCE: 1377-125P  
; CURRENT APPLICATION NUMBER: US/09/735,487  
; PRIOR FILING DATE: 2000-12-14  
; PRIOR APPLICATION NUMBER: 09/117,217  
; PRIOR FILING DATE: 1998-07-24  
; NUMBER OF SEQ ID NOS: 15  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 11  
; LENGTH: 2601  
; TYPE: DNA  
; ORGANISM: HIV-HXB2  
; FEATURE:  
; NAME/KEY: CDS  
; LOCATION: (453)...(749)  
; OTHER INFORMATION: Protease  
US-09-735-487-11

Query Match 44.0%; Score 1081.6; DB 4; Length 2601;  
Best Local Similarity 67.9%; Pred. No. 7.6e-169;  
Matches 1610; Conservative 0; Mismatches 734; Indels 28; Gaps 6;  
QY 14 TGGCGAGGCCATGAGCCAGGCCACCA---GGCGCAACATCCTGTGACGCGCAGCAACT 70

Db 77 TGCTGAGCAATGAGCCAGTAACAAATTCAGTACCATAATGATGACAGAGGCAATT 136  
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QY 251 GCAAGCCCCGAGTTCCTCCAGCGAGCAGAAACGCGCCCAACAGCCCCCAGCGCGGAGC 310  
Db 316 GGAAGGCCAGGGAAATTTCTTCAGAGCAGACACAGACCCCAACAGCCCCCAGAGAGAGC 375  
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Db 376 TTCAGTCTGGGTAGAGCAACAACCTCCCCCTCAGAGCAGAGCGCGATAGACAGGAA 435  
QY 365 -----CCCTGAACCTTCCCCCAGATCACCTGTGTGGCAGCGCCCCCTGTGTGAGCATCAAGG 418  
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Db 496 TAGGGGGGCACTAAAGGAAGCTCTATTAGATACAGGAGCAGATGATACAGTATTAGNAG 555  
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QY 599 TGCTGATCGGCCCCACCCCGGTGAACATCATCGCGCGCAACATGCTGACCCAGCTGGGT 658  
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QY 659 GCACCTGAACTTCCCATTCAGCCCATCGAGACGTCGCGCGCTGAGCTGAAGCCCGCA 718  
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QY 479 AGATGAGCCTGCGCGGCAAGTGAAGAGCCCAAGATGATCGCGCGCATCGCGCGCTTCATCA 538  
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QY 779 CCATCTGCGAGGAGATGGAGAGGCGCAAGATCAACAGATCGCGCGCGCAACCCCT 838  
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Db 1456 CTGATAAATGGACAGTACAGCTTATAGTGTGCGAGAAAAGACAGCTGGACTGTCAATG 1515  
QY 1427 ACATCAGAGAGTGGGCGAGCTGAATGGCGCAGCAGATCTTACCCCGGCATCAAG 1486  
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QY 1487 TGGCGCAGCTGTGCAAGCTGCTGGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCTGA 1546  
Db 1576 TTAGGCAATATTGTAACACTCTTAGAGGAACCAAGACACTAAACAGAACTAATACCACTAA 1635  
QY 1547 CCGAGAGCGCGAGCTGGAGCTGGCGCGAGAACCGCGAGATCTCTCGCGCGCGCGCGCGCG 1606  
Db 1636 CAGAAGAACAGAGCTAGAACTGGCAGAGAAACAGAGAGATCTTAAAGAACCACTAGTACG 1695  
QY 1607 GGTGTATCTACAGCCCGACCAAGGACCTGGTGGCGAGATCCAGAAAGAGGCGCGCGCGCG 1666  
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QY 1787 CCATGGAGGAGCTGATCTGGGCGAGACCGCGCAAGTTCGCGCTGCCCATCCAGAGG 1846  
Db 1876 CCACAGAAAGCATAGTAATATGGGAAAGACTCTTAAATTTAACTGCCCATACAAAAGG 1935  
QY 1847 AGACCTGGGAGACCTGGTGGACCGACTACTGCGAGCGCCACCTGGATCCCGAGTGGAGT 1906  
Db 1936 AAACATGGGAACATGTTGGACAGAGTATTGCAAGCCACCTGGATCTCTGAGTGGAGT 1995  
QY 1907 TCGTGAACACCCCCCGCTGGTGAAGCTGTGTGTAACAGCTGGAGAGGCGCGCATCATCG 1966  
Db 1996 TTGTTAATACCCCTCCCTTAGTGAATATTATGTTACCCAGTTAGAGAAAGAACCCATAGTAG 2055  
QY 1967 GCGCGAGACCTTCTACGTGGACGCGCGCGCAACCGGAGACCAAGATCGCGCAAGCGCG 2026  
Db 2056 GAGCGAAGACCTTCTTATGTAGATGGGCGAGCTAAACAGGAGACTAAATTTAGGAAAAGCAG 2115  
QY 2027 GCTAGCTGACCGACCGCGCGCGCGAGAGATCGTGAAGCTGACCGAGACCCAGACCAAC 2086  
Db 2116 GATATGTTACTAATAGAGAGAGACAAAGTTGTCACTTAATGACACCAAAATCAGA 2175  
QY 2087 AGACGAGCTGCGAGCCATCCAGCTGGCGCTGCGAGACAGCGCGCGAGCGGTAACATCG 2146  
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## RESULT 15

US-09-552-950-1  
; Sequence 1, Application US/09552950  
; Patent No. 6541248  
; GENERAL INFORMATION:  
; APPLICANT: Oxford Biomedica (UK) Limited  
; TITLE OF INVENTION: Anti-Viral Vectors  
; FILE REFERENCE: 674524-2004  
; CURRENT APPLICATION NUMBER: US/09/552,950  
; CURRENT FILING DATE: 2000-04-20  
; NUMBER OF SEQ ID NOS: 22  
; SOFTWARE: PatentIn Ver. 2.1

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; SEQ ID NO 1
; LENGTH: 4307
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus
US-09-552-950-1

Query Match      44.0%; Score 1081.6; DB 4; Length 4307;
Best Local Similarity 67.9%; Pred. No. 7.9e-169;
Matches 1610; Conservative 0; Mismatches 734; Indels 28; Gaps 6;

QY      14 TGGCCGAGGCCATGAGCCAGGCCACCA---GGCCCAACATCTGTATGACGGCCAGCACT 70
Db      1088 TGGCTGAAGCAATGAGCCCAAGTAACAAATTCAGCTACATATGATGACAGAGGCAATT 1147
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QY      131 GCAACTGCGCGCGCGCGCGCGCAAGAGGCTGTGGAAGTGCAGCAAGAGGCCACACGA 190
Db      1208 GAATTTGACGGGCGCCCTAGAAAAAGGGCTGTGGAATGTGGAAGAGGACACCAAA 1267
QY      191 TGAAGACTGACCCAGAGCGCCAGGCCAATCTTCCGCGAGAGACTGGCTTCCCGCAG 250
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QY      539 AGGTGCGCAGTACAGACAGATCTGATCGAGATCTGCGCAAGAAAGGCCAATGCGCACG 598
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Result No.	Score	Query		Length	DB	ID	Description
		Match	%				
1	2443.4	99.4	2445	12	US-10-190-435-43		Sequence 43, Appl
2	2436.4	99.2	2930	12	US-10-190-435-9		Sequence 9, Appl
3	2434.8	99.1	3930	12	US-10-190-435-10		Sequence 10, Appl
4	2434.8	99.1	3930	12	US-10-190-435-11		Sequence 11, Appl
5	2434.8	99.1	5184	12	US-10-190-435-58		Sequence 58, Appl
6	2428.6	98.8	2457	12	US-10-190-435-44		Sequence 44, Appl
7	2404.4	97.9	3531	12	US-10-190-435-13		Sequence 13, Appl
8	2403.4	97.8	2457	12	US-10-190-435-45		Sequence 45, Appl
9	2402.8	97.8	3537	12	US-10-190-435-14		Sequence 14, Appl
10	2402.8	97.8	5145	12	US-10-190-435-15		Sequence 15, Appl
11	2401.8	97.8	3537	12	US-10-190-435-12		Sequence 12, Appl
12	2433.4	95.4	5607	12	US-10-190-435-48		Sequence 48, Appl
13	2325.2	94.6	3597	12	US-10-190-435-46		Sequence 46, Appl
14	2295.8	93.4	3624	12	US-10-190-435-47		Sequence 47, Appl
15	2136	86.9	2460	12	US-10-241-009-30		Sequence 30, Appl
16	2135	86.9	3564	12	US-10-241-009-13		Sequence 13, Appl

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; SEQ ID NO 10
; LENGTH: 3930
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Gagcomp1mutatc_C
US-10-190-435-10
;
; Sequence 10, Application US/10190435
; Publication No. US20030145248A1
; GENERAL INFORMATION:
; APPLICANT: ZUR MEDEDE, Jan
; APPLICANT: BARNETT, Susan W.
; APPLICANT: LIAN, Ying
; APPLICANT: ENGELBRECHT, Susan
; APPLICANT: VAN RENSBURG, Estrelita J.
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
; TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES, AND USES THEREOF
; FILE REFERENCE: P18133.003 / 2302-18133
; CURRENT APPLICATION NUMBER: US/10/190,435
; CURRENT FILING DATE: 2002-12-30
; NUMBER OF SEQ ID NOS: 319

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; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 10
; LENGTH: 3930
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Gagcomp1mutatc_C
US-10-190-435-10
Query Match 99.1%; Score 2434.8; DB 12; Length 3930;
Best Local Similarity 99.9%; Pred. No. 0;
Matches 2436; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

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QY 14 TGCCGAGGCGCATGAGACCGAGGCGCCAGAGCGCCATCTGATGCGAGCGCAACTTCA 73
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; SEQ ID NO 10
; LENGTH: 3930
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Gagcomp1mutatc_C
US-10-190-435-10
Query Match 99.1%; Score 2434.8; DB 12; Length 3930;
Best Local Similarity 99.9%; Pred. No. 0;
Matches 2436; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

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Db 3407 TGTGGTACCAAGCTGGAGAGCGCCATCATCGCGCGGAGACCTTCTAGTGGAGCGCG 3466
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## RESULT 4

US-10-190-435-11  
; Sequence 11, Application US/10190435  
; Publication No. US20030143248A1  
; GENERAL INFORMATION:

; APPLICANT: ZUR MEDEDE, Jan  
; APPLICANT: BARNETT, Susan W.  
; APPLICANT: LIAN, Ying  
; APPLICANT: ENGELBRECHT, Susan  
; APPLICANT: VAN RENSBURG, Estrelita J.  
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C  
; TITLE OF INVENTION: POLYPEPTIDES POLYPEPTIDES AND USES THEREOF  
; FILE REFERENCE: P18133.003 / 2302-18133  
; CURRENT APPLICATION NUMBER: US/10/190,435  
; NUMBER OF SEQ ID NOS: 319  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 11  
; LENGTH: 3930  
; TYPE: DNA  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: Description of Artificial Sequence: GagComplmutina\_C

US-10-190-435-11

Query Match 99.1%; Score 2434.8; DB 12; Length 3930;  
Best Local Similarity 99.9%; Pred. No. 0;  
Matches 2436; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

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QY 14 TGGCCGAGGCCATGAGCCAGGCCACCGAGCCCAACATCTGTATGCGAGCGCAACTTCA 73
Db 1487 TGGCCGAGGCCATGAGCCAGGCCACCGAGCCCAACATCTGTATGCGAGCGCAACTTCA 1546
QY 74 AGGGCCCCCAAGCGCATCATCAAGTGTCTCAATGCGGCAAGGAGGCCACATCGCCGCA 133
Db 1547 AGGGCCCCCAAGCGCATCATCAAGTGTCTCAATGCGGCAAGGAGGCCACATCGCCGCA 1606
QY 134 ACTGCGCGCCCCCGCAAGAGGGCTGTGGAAGTGCAGAGTGCAGGAGGCCACCATGTA 193
Db 1607 ACTGCGCGCCCCCGCAAGAGGGCTGTGGAAGTGCAGAGTGCAGGAGGCCACCATGTA 1666
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QY 194 AGAAGTGCACCGAGCCGAGCCCAACTTCTTCCGCGAGGACCTTGCTCCCGAGGGCA 253  
Db 1667 AGGACTGCACCGAGCCGAGCCCAACTTCTTCCGCGAGGACCTTGCTCCCGAGGGCA 1726  
QY 254 AGGCGCGAGGTTCCCGAGCGAGCAACCGCGCAACAGCCCAAGCCGCGAGCTGC 313  
Db 1727 AGGCGCGAGGTTCCCGAGCGAGCAACCGCGCAACAGCCCAAGCCGCGAGCTGC 1786  
QY 314 AGGCGCGAGGTTCCCGAGCGAGCAACCGCGCGAGCGCGCGAGCGCGAGCGCGAGCTGC 373  
Db 1787 AGGCGCGAGGTTCCCGAGCGAGCAACCGCGCGAGCGCGCGAGCGCGAGCGCGAGCTGC 1846  
QY 374 TCCCGCAGATCACTCTGTGCGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 433  
Db 1847 TCCCGCAGATCACTCTGTGCGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 1906  
QY 434 AGGAGGCTCTGTGAGACCG 493  
Db 1907 AGGAGGCTCTGTGAGACCG 1966  
QY 494 GCAAGTGGAGAGCCCAAGATGATCGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 553  
Db 1967 GCAAGTGGAGAGCCCAAGATGATCGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 2026  
QY 554 ACCAGATCTGTATCGAGATCTGTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 613  
Db 2027 ACCAGATCTGTATCGAGATCTGTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 2086  
QY 614 CCCCCGTGAGCATCATCTGCG 673  
Db 2087 CCCCCGTGAGCATCATCTGCG 2146  
QY 674 CCATCAGCCCGCATCGAGACCGGTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 733  
Db 2147 CCATCAGCCCGCATCGAGACCGGTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 2206  
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QY 794 TGAAGAGTGGCCCTGACCGCGAGGAGATCAAGCGCGCGCGCGCGCGCGCGCGCGCGCG 853  
Db 2267 TGAAGAGTGGCCCTGACCGCGAGGAGATCAAGCGCGCGCGCGCGCGCGCGCGCGCGCG 2326  
QY 854 TCGCCATCAAG 913  
Db 2327 TCGCCATCAAG 2386  
QY 914 ACAAGCGCACCCAGGACTTCTGTGAGAGTGCAGCTGGGCGATCCCCACCCCGCGCGCTGA 973  
Db 2387 ACAAGCGCACCCAGGACTTCTGTGAGAGTGCAGCTGGGCGATCCCCACCCCGCGCGCTGA 2446  
QY 974 AGAAG 1033  
Db 2447 AGAAG 2506  
QY 1034 ACCAGGACTTCCGCAAGTACACCGCGCTTCAACATCCCGAGCATCAACAGAGACCCCG 1093  
Db 2507 ACCAGGACTTCCGCAAGTACACCGCGCTTCAACATCCCGAGCATCAACAGAGACCCCG 2566  
QY 1094 GCATCCGCTACCGATACAGTACAGTGTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 1153  
Db 2567 GCATCCGCTACCGATACAGTACAGTGTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 2626  
QY 1154 AGAGCAGCATGACCAAGATCTGTGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 1213  
Db 2627 AGAGCAGCATGACCAAGATCTGTGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 2686  
QY 1214 ACCAGGCG 1273  
Db 2687 ACCAGGCG 2746  
QY 1274 AGGAGCTGGCGAGAGACCTGTGCGCTGGGCGCTTCAACACCCCGAGCAAGAGACCAAG 1333

Db 2747 AGGAGCTGGCGAGAGACCTGTGCGCTGGGCGCTTCAACACCCCGAGCAAGAGACCAAG 2806  
QY 1334 AGGAGCG 1393  
Db 2807 AGGAGCG 2866  
QY 1394 AGCTGCCGAG 1453  
Db 2867 AGCTGCCGAG 2926  
QY 1454 ACTGGGCGAGCAGATCTACCCCGCGATCAAGGTGGCGAGGTGCGCGCGCGCGCGCGCG 1513  
Db 2927 ACTGGGCGAGCAGATCTACCCCGCGATCAAGGTGGCGAGGTGCGCGCGCGCGCGCGCG 2986  
QY 1514 GCGCCAGGCGCTGACCGAGCATGTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 1573  
Db 2987 GCGCCAGGCGCTGACCGAGCATGTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 3046  
QY 1574 AGAAGCGGAGATCTGTGCG 1633  
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QY 1634 TGTGCGCGAGATCCAG 1693  
Db 3107 TGTGCGCGAGATCCAG 3166  
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Db 3167 CTTTCAAGACCTGAAAGACCGCGAGATGACCGCAAGTGGCGCACCGCGCACACCAAGAG 3226  
QY 1754 TGAAGAGCTGACCGAGGCGGTGCGAGAGATGCGCATGGAAGAGATCGATCTGGGGCA 1813  
Db 3227 TGAAGAGCTGACCGAGGCGGTGCGAGAGATGCGCATGGAAGAGATCGATCTGGGGCA 3286  
QY 1814 AGAAGCCCAAGTTCCGCTGCCATCCAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 1873  
Db 3287 AGAAGCCCAAGTTCCGCTGCCATCCAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 3346  
QY 1874 ACTGGAGGCGACCTGAGATCCCGAGTGGAGGATTGTGAACACCCCGCGTGTGAAGC 1933  
Db 3347 ACTGGAGGCGACCTGAGATCCCGAGTGGAGGATTGTGAACACCCCGCGTGTGAAGC 3406  
QY 1934 TGTGATACAGCTGAG 1993  
Db 3407 TGTGATACAGCTGAG 3466  
QY 1994 CCGCACAACCGAGAGACCAAGATCGGCAAGCGCGGCTACGTGACCGAGCCGCGCGAG 2053  
Db 3467 CCGCACAACCGAGAGACCAAGATCGGCAAGCGCGGCTACGTGACCGAGCCGCGCGAG 3526  
QY 2054 AGATGATGAGCTGACCGAGAGACCAACCAAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2113  
Db 3527 AGATGATGAGCTGACCGAGAGACCAACCAAGAGAGAGAGAGAGAGAGAGAGAGAGAG 3586  
QY 2114 CCTGCAAG 2173  
Db 3587 CCTGCAAG 3646  
QY 2174 TCATCCAGGCGCAGCCCGCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2233  
Db 3647 TCATCCAGGCGCAGCCCGCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 3706  
QY 2234 TGAATCAAG 2293  
Db 3707 TGAATCAAG 3766  
QY 2294 ACAGCAGATTCAG 2353  
Db 3767 ACAGCAGATTCAG 3826  
QY 2354 TGAATGGCGGACCTGTGATCTTACAGTACATGAGAGACCTGTGAGAGAGAGAGAGAG 2413

Db 3827 TCGATGGCGCATCGTGTATCTACAGTATCATGACGACCTGTACGTGGCGACGGCGGCC 3886  
Qy 2414 CTAGATCGATTAAAGCTTCCGGGGCTAGCACCGGT 2451  
Db 3887 CTAGATCGATTAAAGCTTCCGGGGCTAGCACCGGT 3924  
RESULT 5  
US-10-190-435-58  
; Sequence 58, Application US/10190435  
; Publication No. US20030143248A1  
; GENERAL INFORMATION:  
; APPLICANT: ZUR MESEDE, Jan  
; APPLICANT: BARNETT, Susan W.  
; APPLICANT: LIAN, Ying  
; APPLICANT: ENGELBRECHT, Susan  
; APPLICANT: VAN RENSBURG, Estrelita J.  
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C  
; TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF  
; FILE REFERENCE: P18133.003 / 2302-18133  
; CURRENT APPLICATION NUMBER: US/10/190,435  
; CURRENT FILING DATE: 2002-12-30  
; NUMBER OF SEQ ID NOS: 319  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 58  
; LENGTH: 5184  
; TYPE: DNA  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: Description of Artificial Sequence: TatRevNefgagOpolIna C  
US-10-190-435-58  
Query Match 99.1%; Score 2434.8; DB 12; Length 5184;  
Best Local Similarity 99.9%; Pred. No. 0;  
Matches 2436; Conservative 0; Mismatches 2; Indels 0; Gaps 0;  
Qy 14 TGGCCGAGGCCATGACGAGCCACCGAGCCCAATCTCTGATGAGCGAGCAACTTCA 73  
Db 2741 TCGCCGAGGCCATGAGCGAGCCACCGAGCCCAATCTCTGATGAGCGAGCAACTTCA 2800  
Qy 74 AGGCCCCAAGCGCATCATCAAGTGTCTTCACTGCGGCAAGAGGGCCACATCGCCGCA 133  
Db 2801 AGGCCCCAAGCGCATCATCAAGTGTCTTCACTGCGGCAAGAGGGCCACATCGCCGCA 2860  
Qy 134 ACTCGCGCCCGCCGCAAGAGGGCTGCTGAGTGGCGCAAGAGGGCCACAGATGA 193  
Db 2861 ACTCGCGCCCGCCGCAAGAGGGCTGCTGAGTGGCGCAAGAGGGCCACAGATGA 2920  
Qy 194 AGGACTGACCGAGCGCCAGGCCCACTTCTTCCGCGAGGACTGCGCTTCCCGCAGGCA 253  
Db 2921 AGGACTGACCGAGCGCCAGGCCCACTTCTTCCGCGAGGACTGCGCTTCCCGCAGGCA 2980  
Qy 254 AGGCCCCGAGTTCGCCAGCGAGCAGAAACCGCGCAACAGCCCCACAGCGCGAGTGC 313  
Db 2981 AGGCCCCGAGTTCGCCAGCGAGCAGAAACCGCGCAACAGCCCCACAGCGCGAGTGC 3040  
Qy 314 AGTGGCGGGCAACACCCCGCAAGAGCGCGCGCGCGCGAGCGCAAGCCCTGAACT 373  
Db 3041 AGTGGCGGGCAACACCCCGCAAGAGCGCGCGCGCGCGAGCGCAAGCCCTGAACT 3100  
Qy 374 TCCCGCCAGATCACCTGTGGCAGCGCCCTCTGTGTGAGCATCAAGTGGCGCGCGCAGATCA 433  
Db 3101 TCCCGCCAGATCACCTGTGGCAGCGCCCTCTGTGTGAGCATCAAGTGGCGCGCAGATCA 3160  
Qy 434 AGGAGGCCCTCTGGACACCGCGCGCGACGACACCGTGTGAGAGATGAGCTTCCCG 493  
Db 3161 AGGAGGCCCTCTGGACACCGCGCGCGACGACACCGTGTGAGAGATGAGCTTCCCG 3220  
Qy 494 GCAAGTGGAGCCCAAGATGATCGCGCGCATCGCGGCTTTCATCAAGTGGCGCAGTACG 553  
Db 3221 GCAAGTGGAGCCCAAGATGATCGCGCGCATCGCGGCTTTCATCAAGTGGCGCAGTACG 3280  
Qy 554 ACCAGATCCTGTATCGAGATCTGCGGCAAGAGGCCATCGGCAACCGTGTGTATCGGCCCA 613

Db 3281 ACCAGATCCTGTATCGAGATCTCGCGCAAGAGCCATCGGCACCGTGTGTATCGGCCCA 3340  
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Db 3341 CCCCCTGAACATCATCGCGCGCAACATGTGTGACCCAGCTGGGTGACCCCTGAACTTCC 3400  
Qy 674 CCATCAGCCCATCGAGACCGTGCCTGTGAAGCTGAAGCCCGGATGAGACGGCCCAAGG 733  
Db 3401 CCATCAGCCCATCGAGACCGTGCCTGTGAAGCTGAAGCCCGGATGAGACGGCCCAAGG 3460  
Qy 734 TGAAGCAGTGGCCCTCACCAGGAGAGATCAAGGCCCTGACCGCCATCTGCGGAGAGA 793  
Db 3461 TGAAGCAGTGGCCCTCACCAGGAGAGATCAAGGCCCTGACCGCCATCTGCGGAGAGA 3520  
Qy 794 TGGAGAAGGAGGCAAGATCACCAAGATCGGCCCGCGAGAACCCCTCAACAACCCCGTGT 853  
Db 3521 TGGAGAAGGAGGCAAGATCACCAAGATCGGCCCGCGAGAACCCCTCAACAACCCCGTGT 3580  
Qy 854 TCGCCATCAAGAGAAGAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAG 913  
Db 3581 TCGCCATCAAGAGAAGAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAG 3640  
Qy 914 ACAAGCGCACCCAGGACTTCTGGGAGGTGCAGCTGGGCATCCCCCACCCTCGGCCCTGA 973  
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Qy 974 AGAAGAAGAGAGCGTGAACCGTGTGACCTGGGCGACGCTACTTTCAGCGTGCCTGTG 1033  
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Qy 1034 ACAGGAGCTTCCGCAAGTACACCGCTTACCTTCCCGAGCATCAACAAGAGACCCCG 1093  
Db 3761 ACAGGAGCTTCCGCAAGTACACCGCTTACCTTCCCGAGCATCAACAAGAGACCCCG 3820  
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Qy 1154 AGAGCAGCATGACCAAGATCTGTGAGCCCTTCCGCGCCGCAACCCCGAGATCTGTATCT 1213  
Db 3881 AGAGCAGCATGACCAAGATCTGTGAGCCCTTCCGCGCCGCAACCCCGAGATCTGTATCT 3940  
Qy 1214 ACCAGCCCCCTGTAGCTGGGCGAGACCTGGAGATCGGCCAGACCGCGCGAGATCG 1273  
Db 3941 ACCAGCCCCCTGTAGCTGGGCGAGACCTGGAGATCGGCCAGACCGCGCGAGATCG 4000  
Qy 1274 AGGAGCTTGGCCAAAGCACCTGCTGGCTGGGGCTTCAACACCCCGCAACAAGACCCAGA 1333  
Db 4001 AGGAGCTTGGCCAAAGCACCTGCTGGCTGGGGCTTCAACACCCCGCAACAAGACCCAGA 4060  
Qy 1334 AGGAGCCCCCTTCTGTGCCATCGAGTGCACCCCGCAAGTGGACCGTGGAGCCCATCG 1393  
Db 4061 AGGAGCCCCCTTCTGTGCCATCGAGTGCACCCCGCAAGTGGACCGTGGAGCCCATCG 4120  
Qy 1394 AGCTGCCGAGAGGAGAGCTGACCGTGAACACATCCAGAGCTTGTGGGCAAGCTGA 1453  
Db 4121 AGCTGCCGAGAGGAGAGCTGACCGTGAACACATCCAGAGCTTGTGGGCAAGCTGA 4180  
Qy 1454 ACTGGGCCAGCCAGATCTACCCCGCATCAAGTGGCGCAGCTGTCAAGCTGTGCGCG 1513  
Db 4181 ACTGGGCCAGCCAGATCTACCCCGCATCAAGTGGCGCAGCTGTCAAGCTGTGCGCG 4240  
Qy 1514 GCGCCAAAGCCCTTGAACGACATCTGCCCCCTGACCGAGAGGCGGAGCTGGAGCTGCGCG 1573  
Db 4241 GCGCCAAAGCCCTTGAACGACATCTGCCCCCTGACCGAGAGGCGGAGCTGGAGCTGCGCG 4300  
Qy 1574 AGAACCGCGAGATCTTGGCGGAGCCCGTGCACCGCGTGTACTACGACCCCGAGCAAGAAC 1633  
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Qy 1634 TGTGTGCGGAGATCCAGAGAGCAGGGCCACACAGCTGGACCTTACCAGATCTTACCAGAGC 1693





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Db 901 TTCCGGAGCTGAACAAGCGCACCCAGGACTTCTTGGAGGTGCGAGCTGGGCTATCCCCAC 960
Qy 961 CCGCGCGGCTGAAGAAGAGAGAGCGTGACCGTGTGAGCTGGCGAGCGCTACTTC 1020
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Db 1021 AGCGTGCCCTGACGAGGACTTCCGCAAGTACACCGCCTTCCACATCCCGCAGCATCAAC 1080
Qy 1081 AACGAGACCCCGGSCATCCGCTACCACTAACAAGTGTGCCCCAGGCTGGAAGGGCAGC 1140
Db 1081 AACGAGACCCCGGSCATCCGCTACCACTAACAAGTGTGCCCCAGGCTGGAAGGGCAGC 1140
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Db 1141 CCCAGCATCTTCAGAGACATGACCAAGATCTTGAGCCCTTCCGCGCCCGCACCACCC 1200
Qy 1201 GAGATCGTGATACCAAGGCCCCCTGTAGTGGGCGAGCGACCTGGAGATCGGCGACAC 1260
Db 1201 GAGATCGTGATACCAAGGCCCCCTGTAGTGGGCGAGCGACCTGGAGATCGGCGACAC 1260
Qy 1261 CGCGCAAGATCGAGGAGCTGGCAAGCACTGTGCGCTGGGCTTTCACCAACCCCGCAG 1320
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Qy 1321 AAGAAGACCAAGAGAGGCCCCCTTCTGCCCCAT-----CGAGCTGCACCCGCAAG 1374
Db 1321 AAGAAGACCAAGAGAGGCCCCCTTCTGCCCCAT-----CGAGCTGCACCCGCAAG 1374
Qy 1375 TGGACCGTGCAGGCCATCGAGCTGCCGAGAAGAGAGCTGGACCGTGAACGACATCCAG 1434
Db 1381 TGGACCGTGCAGGCCATCGAGCTGCCGAGAAGAGAGCTGGACCGTGAACGACATCCAG 1440
Qy 1435 AAGCTGTGGCAAGCTGAAGTGGGCGAGCGAGATCTACCCGCGCATCAAGGTGCGCCAG 1494
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Db 1561 GCGAGCTGGAGCTGGCGGAGAACCGGAGATCTGCGCGAGCCCGTGCACGCGGTGAC 1620
Qy 1615 TAGACCCCGAGAGACCTGTGTGGCGGAGATCCAGAAAGAGGCGCACGACCATGTGACC 1674
Db 1621 TAGACCCCGAGAGACCTGTGTGGCGGAGATCCAGAAAGAGGCGCACGACCATGTGACC 1680
Qy 1675 TACAGATCTACAGGAGCGCTTCAAGAACTGAAGACCGCAAGTAGTAGCGCAAGATCGC 1734
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Qy 1735 ACCGCCACACCAACGAGCTGAAGAGCTGACCGAGGCGCGTGCAGAAAGATCGCCATGGAG 1794
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Qy 1795 AGCATCGTGATCGGGCGAAGACCCCGAAGTTCGCGCTGCCCATCCAGAAAGAGACCTGG 1854
Db 1801 AGCATCGTGATCGGGCGAAGACCCCGAAGTTCGCGCTGCCCATCCAGAAAGAGACCTGG 1860
Qy 1855 GAGACCTGTGGACGACTGTGCGAGCGCACCTGGATCCCGAGTGGGAGTTCGTGAAC 1914
Db 1861 GAGACCTGTGGACGACTGTGCGAGCGCACCTGGATCCCGAGTGGGAGTTCGTGAAC 1920
Qy 1915 ACCCCCCCTGTGTGAAGCTGTGTATCAGCTGGAGAAAGAGGCCATCATCGGCGCGAG 1974
Db 1921 ACCCCCCCTGTGTGAAGCTGTGTATCAGCTGGAGAAAGAGGCCATCATCGGCGCGAG 1980
Qy 1975 ACCTTCTACGTGAGCGCGCGCAACCGCGAGACCAAGATCGGCAAGGCGCGCTACGTG 2034
Db 1981 ACCTTCTACGTGAGCGCGCGCAACCGCGAGACCAAGATCGGCAAGGCGCGCTACGTG 2040
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Qy 2035 ACCGACCGGGCGCGCAGAGATCTGAGCCTCACCGAGACACACCCACAGAGACCGAG 2094
Db 2041 ACCGACCGGGCGCGCAGAGATCTGAGCCTCACCGAGACACACCCACAGAGACCGAG 2100
Qy 2095 CTGACGCGCATCAGCTGGCCCTGACAGGACAGCGGCGAGGAGTGAACATCTGTGACCGAC 2154
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Qy 2155 AGCCAGTAGCCCTTGGGCTCATCTCAGGCGCCAGCCCGCAAGAGAGCGAGCGAGCTGGTG 2214
Db 2161 AGCCAGTAGCCCTTGGGCTCATCTCAGGCGCCAGCCCGCAAGAGAGCGAGCGAGCTGGTG 2220
Qy 2215 AACCAATCATCAGCAGCTGTATCAAGAAGGAGAGGTGTACCTGAGCTGGGTGCCCGCC 2274
Db 2221 AACCAATCATCAGCAGCTGTATCAAGAAGGAGAGGTGTACCTGAGCTGGGTGCCCGCC 2280
Qy 2275 CACAAGGGCATCGCGGCAACGAGCAGATCGACAAGCTGTGTAGCAAGGSCATCCGCAAG 2334
Db 2281 CACAAGGGCATCGCGGCAACGAGCAGATCGACAAGCTGTGTAGCAAGGSCATCCGCAAG 2340
Qy 2335 GTGCTTTCTGACCGGCTCGATGCGCGGATCGTGTATCCAGTACATGAGGAGACCTG 2394
Db 2341 GTGCTTTCTGACCGGCTCGATGCGCGGATCGTGTATCCAGTACATGAGGAGACCTG 2400
Qy 2395 TAGCTGGCAGCGCGGCGCTTAGATCGATTAAAGCTTCCCGGGCTAGCACCGGT 2451
Db 2401 TAGCTGGCAGCGCGGCGCTTAGATCGATTAAAGCTTCCCGGGCTAGCACCGGT 2457
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## RESULT 7

US-10-190-435-13

; Sequence 13, Application US/10190435

; Publication No. US20030143248A1

; GENERAL INFORMATION:

; APPLICANT: ZUR MEGEDE, Jan

; APPLICANT: BARNETT, Susan W.

; APPLICANT: LIAN, Ying

; APPLICANT: ENGELBRECHT, Susan

; APPLICANT: VAN RENSBURG, Estrelita J.

; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C

; TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF

; FILE REFERENCE: PP18133.003 / 2302-18133

; CURRENT APPLICATION NUMBER: US/10/190,435

; CURRENT FILING DATE: 2002-12-30

; NUMBER OF SEQ ID NOS: 319

; SOFTWARE: Patent In Ver. 2.0

; SEQ ID NO 13

; LENGTH: 3531

; TYPE: DNA

; ORGANISM: Artificial Sequence

; FEATURE:

; OTHER INFORMATION: Description of Artificial Sequence: GagPolmut\_C

US-10-190-435-13

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Query Match 97.9%; Score 2404.4; DB 12; Length 3531;
Best Local Similarity 99.1%; Pred. No. 0;
Matches 2417; Conservative 0; Mismatches 21; Indels 0; Gaps 0;
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Qy 14 TGGCCGAGGCGCATGAGCCAGGCGCACCGAGCCCAACATCTGTATGCGCGCAACATTCA 73
Db 1088 TGGCCGAGGCGCATGAGCCAGGCGCACACCGAGCTGATGTCAGAAAGAGCAACTTTAAA 1147
Qy 74 AGGGCCCCAAGGCGCATCATCAAGTGTTCACCTGCGGCGAGGAGGCCACATCGCCGCA 133
Db 1148 AGGGCCCCAAGGCGCATCATCAAGTGTTCACCTGCGGCGAGGAGGCCACATCGCCGCA 1207
Qy 134 ACTGCGCGCCCCCGCAAGAGGGCTGTGGAAGTGGCGAAGGAGGGGCCACAGATGA 193
Db 1208 ACTGCGCGCCCCCGCAAGAGGGCTGTGGAAGTGGCGAAGGAGGGGCCACAGATGA 1267
Qy 194 AGGACTGCACCGAGCGCCAGGCCAACTTCTTCGCGAGGACCTTGGCTTCCCCCAGGCA 253
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QY 2414 CTAGGATCGATTAAAGCTTCCGGGGCTAGACCGGT 2451  
 Db 3488 CTAGGATCGATTAAAGCTTCCGGGGCTAGACCGGT 3525

## RESULT 8

US-10-190-435-45  
 ; Sequence 45, Application US/10190435  
 ; Publication No. US20030143248A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: ZUR MEGEDE, Jan  
 ; APPLICANT: BARNETT, Susan W.  
 ; APPLICANT: LIAN, Ying  
 ; APPLICANT: ENGBRECHT, Susan  
 ; APPLICANT: VAN RENSBURG, Estrelita J.  
 ; TITLE OF INVENTION: POLYNUCLOTIDES ENCODING ANTIGENIC HIV TYPE C  
 ; FILE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USRS THEREOF  
 ; FILE REFERENCE: P18133.003 / 2302-18133  
 ; CURRENT APPLICATION NUMBER: US/10/190,435  
 ; CURRENT FILING DATE: 2002-12-30  
 ; NUMBER OF SEQ ID NOS: 319  
 ; SOFTWARE: PatentIn Ver. 2.0  
 ; SEQ ID NO 45  
 ; LENGTH: 2457  
 ; TYPE: DNA  
 ; ORGANISM: Artificial Sequence  
 ; FEATURE:  
 ; OTHER INFORMATION: Description of Artificial Sequence: p2Polopt\_C  
 US-10-190-435-45

Query Match 97.8%; Score 2403.4; DB 12; Length 2457;  
 Best Local Similarity 99.3%; Pred. No. 0;  
 Matches 2439; Conservative 0; Mismatches 6; Indels 12; Gaps 2;

QY 7 GCACATCGGCGAGCCATGAGCCACAGCCACAGCCGACATCTGATGAGGGAGC 56  
 Db 1 GCACCATGGCGAGGCCATGAGCCACAGCCACAGCCGACATCTGATGAGGGAGC 50  
 QY 67 AACTTCAGGGCCCCAAGCGCATCATCAAGTCTCACTGGCGAAGAGGGCCACATC 126  
 Db 61 AACTTCAGGGCCCCAAGCGCATCATCAAGTCTCACTGGCGAAGAGGGCCACATC 120  
 QY 127 GCCGCAACTGCGGCCCCCGCCAGAGAGGCTCTGAAAGTGGCGGCAAGAGGGCCAC 186  
 Db 121 GCCCGCAACTGCGGCCCCCGCCAGAGAGGCTCTGAAAGTGGCGGCAAGAGGGCCAC 180  
 QY 187 CAGATGAAGGACTCACCGAGCGCCAGCCACTTCTCCGAGGAGCTGGCTTCCC 246  
 Db 181 CAGATGAAGGACTCACCGAGCGCCAGCCACTTCTCCGAGGAGCTGGCTTCCC 240  
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 Db 241 CAGGGCAAGGCCCGGAGTTCCCGAGCGAGAGAACCGGCCAACAGCCCAAGCCGC 300  
 QY 307 GAGTGCAGTGCAGGGGCGAACAACCCCGCAGCGAGGCGGCGCGCAGGGGACCC 366  
 Db 301 GAGTGCAGTGCAGGGGCGAACAACCCCGCAGCGAGGCGGCGCGCAGGGGACCC 360  
 QY 367 CTGAATCTCCCGCAGATCACTCTGTGGACGCGCCCTTGTGAGCATCAAGTGGGCGGC 426  
 Db 361 CTGAATCTCCCGCAGATCACTCTGTGGACGCGCCCTTGTGAGCATCAAGTGGGCGGC 420  
 QY 427 CAGATCAAGAGGCGCTCTGTGACACCGGCGCGAGCACCGTCTGTGAGAGATGAGC 486  
 Db 421 CAGATCAAGAGGCGCTCTGTGACACCGGCGCGAGCACCGTCTGTGAGAGATGAGC 480  
 QY 487 CTGCCCCGCAAGTGGAGGCCAGATGATCGGGGCGATCGGGGCTTTCATCAGGTGCGC 546  
 Db 481 CTGCCCCGCAAGTGGAGGCCAGATGATCGGGGCGATCGGGGCTTTCATCAGGTGCGC 540  
 QY 547 CAGTACGACCATCTGATCGAGATCTCGGCGAAGAGGCCATCGGACCGCTGCTGATC 606  
 Db 541 CAGTACGACCATCTGATCGAGATCTCGGCGAAGAGGCCATCGGACCGCTGCTGATC 600

QY 607 GGCCTCCACCCCCGTGAACATCATCGCCGCGCAACATGCTGACCCAGCTGGGTGACCCCTG 666  
 Db 601 GGCCTCCACCCCCGTGAACATCATCGCCGCGCAACATGCTGACCCAGCTGGGTGACCCCTG 660  
 QY 667 AACTTCCCATCAGCCCCATCGAGACCGTGGCCCGTGAAGCTGAAGCCCGGATGACGGC 726  
 Db 661 AACTTCCCATCAGCCCCATCGAGACCGTGGCCCGTGAAGCTGAAGCCCGGATGACGGC 720  
 QY 727 CCCAAGTGAAGCAGTGGCCCTGACCCGAGGAGAGATCAAGGCCCTGACCCGCTCTG 786  
 Db 721 CCCAAGTGAAGCAGTGGCCCTGACCCGAGGAGAGATCAAGGCCCTGACCCGCTCTG 780  
 QY 787 GAGGATGAGAGAGAGGGGCAAGATCACCAGATGCGCCCCCGAGAACCCCTACAGACC 846  
 Db 781 GAGGATGAGAGAGAGGGGCAAGATCACCAGATGCGCCCCCGAGAACCCCTACAGACC 840  
 QY 847 CCGCTGTTCCGCTCAAGAGAGAGAGACAGCACCAAGTGGCGCAAGCTGGTGACTTCGCG 906  
 Db 841 CCGCTGTTCCGCTCAAGAGAGAGAGACAGCACCAAGTGGCGCAAGCTGGTGACTTCGCG 900  
 QY 907 GAGCTGAACAGGCGACCCAGACTTCTGGGAGGTGAGCTGGGCATCCCCACCCCGCC 966  
 Db 901 GAGCTGAACAGGCGACCCAGACTTCTGGGAGGTGAGCTGGGCATCCCCACCCCGCC 960  
 QY 967 GGCCTGAAGAGAGAGAGCGTGAACCGTGTGGAGCTGGGCGAGCGCTTACTTCAGCGTG 1026  
 Db 961 GGCCTGAAGAGAGAGAGCGTGAACCGTGTGGAGCTGGGCGAGCGCTTACTTCAGCGTG 1020  
 QY 1027 CCGCTGAGAGAGACTTCCGCAAGTACACCGCTTCAACATCCCGAGCATCAACAGAG 1086  
 Db 1021 CCGCTGAGAGAGACTTCCGCAAGTACACCGCTTCAACATCCCGAGCATCAACAGAG 1080  
 QY 1087 ACCCCGCGCATCGCTTACCAGTACACAGCTGCTGCCCGCGGCTGGAGGCGAGCCCGAC 1146  
 Db 1081 ACCCCGCGCATCGCTTACCAGTACACAGCTGCTGCCCGCGGCTGGAGGCGAGCCCGAC 1140  
 QY 1147 ATCTTCCAGAGAGCATGACCAAGATCTCTGGAGCCCTTCCGCGCGCCGCAACCCGAGATC 1206  
 Db 1141 ATCTTCCAGAGAGCATGACCAAGATCTCTGGAGCCCTTCCGCGCGCCGCAACCCGAGATC 1200  
 QY 1207 GTGATCTAGA-----GGCCCCCTGTAGCTGGGAGAGAGCTGGAGATCGGCGAGAC 1260  
 Db 1201 GTGATCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAGCTAG 1260  
 QY 1261 CGCGCCAGATCAGGAGCTGGCAAGACCTGCTGCGCTGGGGCTTACCAACCCCGAG 1320  
 Db 1261 CGCGCCAGATCAGGAGCTGGCAAGACCTGCTGCGCTGGGGCTTACCAACCCCGAG 1320  
 QY 1321 AAGAAGCACAGAGAGCCCCCTTCTTCCGCTAT-----CGAGCTGACCCCGGCAAG 1374  
 Db 1321 AAGAAGCACAGAGAGCCCCCTTCTTCCGCTAT-----CGAGCTGACCCCGGCAAG 1380  
 QY 1375 TGAGCGCTGAGCCCATCGAGCTGCCCGAGAGAGAGCTGGACCGTGAACGACATCCAG 1434  
 Db 1381 TGAGCGCTGAGCCCATCGAGCTGCCCGAGAGAGAGCTGGACCGTGAACGACATCCAG 1440  
 QY 1435 AAGCTGTGGGCAAGCTGAATGGGCGAGCCAGATCTACCCCGGCAATCAAGTGGGCGAG 1494  
 Db 1441 AAGCTGTGGGCAAGCTGAATGGGCGAGCCAGATCTACCCCGGCAATCAAGTGGGCGAG 1500  
 QY 1495 CTGTGAGCTGTGGCGGCGCAAGGCGCTGACCGACATCGTGGCCCTGACCGAGGAG 1554  
 Db 1501 CTGTGAGCTGTGGCGGCGCAAGGCGCTGACCGACATCGTGGCCCTGACCGAGGAG 1560  
 QY 1555 GCGGAGCTGAGCTGGCGGAGAACCGCGAGATCTCTGCGGAGCGCTGACCGCGCTGTAC 1614  
 Db 1561 GCGGAGCTGAGCTGGCGGAGAACCGCGAGATCTCTGCGGAGCGCTGACCGCGCTGTAC 1620  
 QY 1615 TAGGACCCCGAGGAGCTGTGGCGGAGATCCAGAGAGAGGCGGACCGACAGTGGAGC 1674  
 Db 1621 TAGGACCCCGAGGAGCTGTGGCGGAGATCCAGAGAGAGGCGGACCGACAGTGGAGC 1680

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QY 1675 TACCAGATCTACCGAGAGCCCTTCAAGAACTTGAAAGACCGGCAAGTACGCCAAGATGCGC 1734
Db 1681 TACCAGATCTACCGAGAGCCCTTCAAGAACTTGAAAGACCGGCAAGTACGCCAAGATGCGC 1740
QY 1735 ACCGCCCAACACCAACGAGCTGTAAGACAGTGAACCGAGGCGCTGCGAAGATGCGCATGGAG 1794
Db 1741 ACCGCCCAACACCAACGAGCTGTAAGACAGTGAACCGAGGCGCTGCGAAGATGCGCATGGAG 1800
QY 1795 AGCATCTGATCTGGGGCAAGACCCCAAGTTCCGCTGACCATCCGAAAGAGACCTGG 1854
Db 1801 AGCATCTGATCTGGGGCAAGACCCCAAGTTCCGCTGACCATCCGAAAGAGACCTGG 1860
QY 1855 GAGACTGTGTGAGACCGACTACTGTGACAGGCAACCTGATATCCCGAGTGGAGTTGCTGTAAC 1914
Db 1861 GAGACTGTGTGAGACCGACTACTGTGACAGGCAACCTGATATCCCGAGTGGAGTTGCTGTAAC 1920
QY 1915 ACCCCCCCTGTTGTAAGCTGTGTGTAACAGCTGTAAGAGAGAGAGCCCATCTGCGGCCGAG 1974
Db 1921 ACCCCCCCTGTTGTAAGCTGTGTGTAACAGCTGTAAGAGAGAGAGCCCATCTGCGGCCGAG 1980
QY 1975 ACCCTTACGTGAGACGCGCGCCCAACCGGAGACCAAGATCCGCAAGCGCGCTACGTG 2034
Db 1981 ACCCTTACGTGAGACGCGCGCCCAACCGGAGACCAAGATCCGCAAGCGCGCTACGTG 2040
QY 2035 ACCGACCGGGCGCGCGCAAGAGTGTGAGCTTGAACCGAGACCAACCAAGAACCGGAG 2094
Db 2041 ACCGACCGGGCGCGCGCAAGAGTGTGAGCTTGAACCGAGACCAACCAAGAACCGGAG 2100
QY 2095 CTGACAGGACCATCCAGCTGCGCTGTCAGAGACGCGGCGAGAGTGAACATGTGAGACCGAC 2154
Db 2101 CTGACAGGACCATCCAGCTGCGCTGTCAGAGACGCGGCGAGAGTGAACATGTGAGACCGAC 2160
QY 2155 AGCCAGTACGCGCTGCGGCATCATTCAGAGCCGACCGCAAGACGAGACGAGCTGAGTGTG 2214
Db 2161 AGCCAGTACGCGCTGCGGCATCATTCAGAGCCGACCGCAAGACGAGACGAGCTGAGTGTG 2220
QY 2215 AACCAATCATTCAGACGAGCTGATCAAGAGAGAGTGTGACTGAGCTGAGTGTGCGCC 2274
Db 2221 AACCAATCATTCAGACGAGCTGATCAAGAGAGAGTGTGACTGAGCTGAGTGTGCGCC 2280
QY 2275 CACAAGGGCATCGCGCGCAACGAGCAGATCGACAGCTGTGTGAGCAAGGGCATCCGCAAG 2334
Db 2281 CACAAGGGCATCGCGCGCAACGAGCAGATCGACAGCTGTGTGAGCAAGGGCATCCGCAAG 2340
QY 2335 GTGCTGTCTCTGACGCGCATCGATGCGGCGCATCGTGTACTACAGTACATGAGACCTG 2394
Db 2341 GTGCTGTCTCTGACGCGCATCGATGCGGCGCATCGTGTACTACAGTACATGAGACCTG 2400
QY 2395 TACGTGGGACGCGCGCGCTAGATGATTAAAGCTTCCGCGGCTAGACCCGGT 2451
Db 2401 TACGTGGGACGCGCGCGCTAGATGATTAAAGCTTCCGCGGCTAGACCCGGT 2457

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RESULT 9
US-10-190-435-14
; Sequence 14, Application US/10190435
; General Information:
;   APPLICANT: ZUR MEDEDE, Jan
;   APPLICANT: BARNETT, Susan W.
;   APPLICANT: LIAN, Ying
;   APPLICANT: ENGELBRECHT, Susan
;   TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
;   TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF
;   FILE REFERENCE: P18133.003 / 2302-18133
;   CURRENT APPLICATION NUMBER: US/10190.435
;   NUMBER OF SEQ ID NOS: 319
;   SOFTWARE: PatentIn Ver. 2.0
;   LENGTH: 3537
;   TYPE: DNA

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; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: GagPolmutact_C
US-10-190-435-14

Query Match      97.8%; Score 2402.8; DB 12; Length 3537;
Best Local Similarity 99.1%; Pred. No. 0;
Matches 2416; Conservative 0; Mismatches 22; Indels 0; Gaps 0;

QY 14 TGCCCGAGGCGCATGAGACCGGCCACGAGGCCCAATCTTGTATGACCGGCAACTTCA 73
Db 1094 TGCCCGAGGCGCATGAGACCGGCCACGAGGCCCAATCTTGTATGAGAGAGCACTTTAAA 1153
QY 74 AGGGCCCAAGGCGCATCATCAAGTGTTCATCTGCGCGCAAGAGGGCCCATATGCCCCGCA 123
Db 1154 AGGGCCCAAGGCGCATCATCAAGTGTTCATCTGCGCGCAAGAGGGCCCATATGCCCCGCA 1213
QY 134 ACTGCGCGCGCCCCCGCAAGAGAGGCTGTGTAAGTGTGCGCAAGAGGGCCACAGATGA 193
Db 1214 ACTGCGCGCGCCCCCGCAAGAGAGGCTGTGTAAGTGTGCGCAAGAGGGCCACAGATGA 1273
QY 194 AGGACTGTGACCGAGGCGCCAGGCGCACTTCTTCGCGAGAGACTGTGCTTCCCGAGGGCA 253
Db 1274 AGGACTGTGACCGAGGCGCCAGGCGCACTTCTTCGCGAGAGACTGTGCTTCCCGAGGGCA 1333
QY 254 AGGCGCGGAGTCTCCCGACGAGCAGAGACCGCGCCCAAGCGCCCAAGCGCGGAGCTGC 313
Db 1334 AGGCGCGGAGTCTCCCGACGAGCAGAGACCGCGCCCAAGCGCCCAAGCGCGGAGCTGC 1393
QY 314 AGGTGCGGCGCGCAACCCCGGAGGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCACT 373
Db 1394 AGGTGCGGCGCGCAACCCCGGAGGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCACT 1453
QY 374 TCCCGCGAGTCAACCTGTGTGTGAGAGCGCCCTGTGTGAGCATCAAGTGTGTGTGAGTCA 433
Db 1454 TCCCGCGAGTCAACCTGTGTGTGAGAGCGCCCTGTGTGAGCATCAAGTGTGTGTGAGTCA 1513
QY 434 AGGAGCGCTGTGTGAGACCGCGCGCGAGCAGACCGCTGTGAGAGAGATGAGCTGCGCG 493
Db 1514 AGGAGCGCTGTGTGAGACCGCGCGCGAGCAGACCGCTGTGAGAGAGATGAGCTGCGCG 1573
QY 494 GCAAGTGTGAAGCCCAAGATGATGTGCGGCGCATGCGCGCTTCAATCAAGTGTGCGCAATAG 553
Db 1574 GCAAGTGTGAAGCCCAAGATGATGTGCGGCGCATGCGCGCTTCAATCAAGTGTGCGCAATAG 1633
QY 554 ACCAGATCTGTGTGAGATCTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 613
Db 1634 ACCAGATCTGTGTGAGATCTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 1693
QY 614 CCCCCGTGAACATCATCGCGCGCAACATCTGACCAAGCTGTGAGCTGACACCTGGAATTGC 673
Db 1694 CCCCCGTGAACATCATCGCGCGCAACATCTGACCAAGCTGTGAGCTGACACCTGGAATTGC 1753
QY 674 CCATACGCCCATTCAGACCGTGTGCGGTGAAGCTGAAGCCCGGAGATGAGACCGCCCAAG 733
Db 1754 CCATACGCCCATTCAGACCGTGTGCGGTGAAGCTGAAGCCCGGAGATGAGACCGCCCAAG 1813
QY 734 TGAAGAGAGGCGCGCTGTGACCGAGAGAGATCAAGGCGCTGACCGCATCTGTGAGAGAG 793
Db 1814 TGAAGAGAGGCGCGCTGTGACCGAGAGAGATCAAGGCGCTGACCGCATCTGTGAGAGAG 1873
QY 794 TGAAGAGAGGCGCGCAAGATCAACCAAGATGCGCGCGGAGAACCTCTACACACACCCCGTGT 853
Db 1874 TGAAGAGAGGCGCGCAAGATCAACCAAGATGCGCGCGGAGAACCTCTACACACACCCCGTGT 1933
QY 854 TGGCCATCAAGAGAGAGAGAGAGACCAAGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 913
Db 1934 TGGCCATCAAGAGAGAGAGAGAGAGACCAAGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 1993
QY 914 ACAAAGCGACCCAGAGACTTCTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 973
Db 1994 ACAAAGCGACCCAGAGACTTCTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 2053

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QY 974 AGAAGAAAGAGCGTACCGTCTGCTGACGCTGGCGACGCGTACTTTCAGCGTGCCTCGG 1033
Db 2054 AGAAGAGAGAGCGTACCGTCTGCTGAGCTGGCGACGCGTACTTTCAGCGTGCCTCGG 2113
QY 1034 ACAGAGATTCGCGAAGTACACCGCTTCCACCTCCAGCATCAACAACGAGACCCCG 1093
Db 2114 ACAGAGACTTCCGCAAGTACACCGCTTCCACCTCCAGCATCAACAACGAGACCCCG 2173
QY 1094 GCATCCGCTACCAAGTACCAAGTGTGCTGCCAGAGCTGGAAGGGGAGGCCCCAGATCTTC 1153
Db 2174 GCATCCGCTACCAAGTACCAAGTGTGCTGCCAGAGCTGGAAGGGGAGGCCCCAGATCTTC 2233
QY 1154 AGAGCAGCATGACCAAGATCCTGGAGCCCTTCCGCGCCCGCAACCCCGAGATCGTGATCT 1213
Db 2234 AGAGCAGCATGACCAAGATCCTGGAGCCCTTCCGCGCCCGCAACCCCGAGATCGTGATCT 2293
QY 1214 ACCAGGCCCTTGTAGCTGGGAGCGACCTGGAGATCGGCGCAGCACCGGCCCAAGATCG 1273
Db 2294 ACCAGGCCCTTGTAGCTGGGAGCGACCTGGAGATCGGCGCAGCACCGGCCCAAGATCG 2353
QY 1274 AGGAGCTGCGCAAGCACCTGCTGGCTGGGCTTCAACACCCCGGACCAAGACACCGA 1333
Db 2354 AGGAGCTGCGCAAGCACCTGCTGGCTGGGCTTCAACACCCCGGACCAAGACACCGA 2413
QY 1334 AGGAGCCCTTCTTCCCTCCCATGAGCTGCACCCCGACAAAGTGGACCGTGCAGCCCATCG 1393
Db 2414 AGGAGCCCTTCTTCCCTCCCATGAGCTGCACCCCGACAAAGTGGACCGTGCAGCCCATCG 2473
QY 1394 AGCTGCCGAGAGAGAGAGCTGACCTGAAACGACATCCAGAGCTGGTGGGCAAGCTGA 1453
Db 2474 AGCTGCCGAGAGAGAGAGCTGACCTGAAACGACATCCAGAGCTGGTGGGCAAGCTGA 2533
QY 1454 ACTGGGCGACCCAGATCTACCCCGCATCAAGGTGGCGGAGCTGTCAAGCTGTGCGG 1513
Db 2534 ACTGGGCGACCCAGATCTACCCCGCATCAAGGTGGCGGAGCTGTCAAGCTGTGCGG 2593
QY 1514 GCGCCAAGCCCTGACCGACATCGTGCCCTGACCGAGGAGGCGAGCTGGAGCTGGCCG 1573
Db 2594 GCGCCAAGCCCTGACCGACATCGTGCCCTGACCGAGGAGGCGAGCTGGAGCTGGCCG 2653
QY 1574 AGAACCGGAGATCTTGGCGGAGCCGCTGACGGCGTGTACTAGACCCCGCAAGAAC 1633
Db 2654 AGAACCGGAGATCTTGGCGGAGCCGCTGACGGCGTGTACTAGACCCCGCAAGAAC 2713
QY 1634 TGGTGGCGAGATCCAGAACGAGGCGCACACAGTGGACCTACCGATCTACCGAGC 1693
Db 2714 TGGTGGCGAGATCCAGAACGAGGCGCACACAGTGGACCTACCGATCTACCGAGC 2773
QY 1694 CTTTCAAGAACCTGAAGACCGGCAAGTACGCCAAGATGCGCACCGGCCACACCAACGAG 1753
Db 2774 CTTTCAAGAACCTGAAGACCGGCAAGTACGCCAAGATGCGCACCGGCCACACCAACGAG 2833
QY 1754 TGAAGCAGCTGACCGAGGCGCTGAGAGATGCCATGAGAGCATCTGTATCTGGGGCA 1813
Db 2834 TGAAGCAGCTGACCGAGGCGCTGAGAGATGCCATGAGAGCATCTGTATCTGGGGCA 2893
QY 1814 AGACCCCGCAAGTTCGCGCTCCCATCCAGAACGAGACCTGGGAGACTGTGTGACCGACT 1873
Db 2894 AGACCCCGCAAGTTCGCGCTCCCATCCAGAACGAGACCTGGGAGACTGTGTGACCGACT 2953
QY 1874 ACTGGAGGCCACCTGGATCCCGGAGTGGGAGTTCGTGAACACCCCGCCCTCGTGAAGC 1933
Db 2954 ACTGGAGGCCACCTGGATCCCGGAGTGGGAGTTCGTGAACACCCCGCCCTCGTGAAGC 3013
QY 1934 TGTGGTACAGCTGGAGAGAGGCCCATCATCGGCGCGAGACCTTCTACTGTGAGCGGG 1993
Db 3014 TGTGGTACAGCTGGAGAGAGGCCCATCATCGGCGCGAGACCTTCTACTGTGAGCGGG 3073
QY 1994 CCGCCAACCGGAGACCAAGATCGGAAGGCGCGTACGTGACCGACCGGGGCGCGCAGA 2053
Db 3074 CCGCCAACCGGAGACCAAGATCGGAAGGCGCGTACGTGACCGACCGGGGCGCGCAGA 3133
QY 2054 AGATCGTGAGCTTGACCGGAGACCAACCAAGAGACCGAGCTGCGAGGCCATCCAGCTGG 2113
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Db 3134 AGATCGTGAGCTTGACCGGAGACCAACCAAGAGACCGAGCTGCGAGGCCATCCAGCTGG 3193
QY 2114 CCTTGAGGACACGCGCAGCAGGTGAACATCTGTGACCCGACAGCAGTACGCGCTGGGCA 2173
Db 3194 CCTTGAGGACACGCGCAGCAGGTGAACATCTGTGACCCGACAGCAGTACGCGCTGGGCA 3253
QY 2174 TCATCCAGGCCACGCCCCGACAGAGCGAGCGAGCTGGTGAACCGAGATCATCGAGCAGC 2233
Db 3254 TCATCCAGGCCACGCCCCGACAGAGCGAGCGAGCTGGTGAACCGAGATCATCGAGCAGC 3313
QY 2234 TGATCAAGAAGAGAAAGTGTACTCTGAGCTGGGTGCCGCCCAAGGGCATCGGGGCA 2293
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QY 2294 ACAGCAGATCGACAAAGCTGGTGAAGGGCATCCGCAAGGTGCTTCTTGACGCGCA 2353
Db 3374 ACAGCAGATCGACAAAGCTGGTGAAGGGCATCCGCAAGGTGCTTCTTGACGCGCA 3433
QY 2354 TCGATGCGCGCATCTGTGATCTACCATGACATGACGACCTGTACGTGGGCGAGCGCGCC 2413
Db 3434 TCGATGCGCGCATCTGTGATCTACCATGACATGACGACCTGTACGTGGGCGAGCGCGCC 3493
QY 2414 CTAGGATCGATTAAAAGCTTCCCGGGCTAGCACCGGT 2451
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RESULT 10
US-10-190-435-15
; Sequence 15, Application US/10190435
; Publication No. US20030143248A1
; GENERAL INFORMATION:
; APPLICANT: ZUR MEGEDE, Jan
; APPLICANT: BARNETT, Susan W.
; APPLICANT: LIAN, Ying
; APPLICANT: ENGELBRECHT, Susan
; APPLICANT: VAN RENSBURG, Estrelita J.
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
; FILE REFERENCE: PP18133.003 / 2302-18133
; CURRENT APPLICATION NUMBER: US/10/190,435
; NUMBER OF SEQ ID NOS: 319
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 15
; LENGTH: 3537
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: GagPolmutIna_C
US-10-190-435-15
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Query Match 97.8%; Score 2402.8; DB 12; Length 3537;
Best Local Similarity 99.1%; Pred. No. 0;
Matches 2416; Conservative 0; Mismatches 22; Indels 0; Gaps 0;
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Db 1154 AGGCCCCCAAGCGCATCATCAAGTCTTCACTGCGGAGAGGGCGCATCGCCGCA 1213
QY 134 ACTGCGCGCCCCCGCCGCAAGAGGCTGCTGGAAGTGGCGGAGAGGGCGCATCGCATCA 193
Db 1214 ACTGCGCGCCCCCGCCGCAAGAGGCTGCTGGAAGTGGCGGAGAGGGCGCATCGCATCA 1273
QY 194 AGGATGCAACGAGCGCGAGGCCAACTTCTTCCGCGAGGACCTGCGCTTCCCGGAGGCA 253
Db 1274 AGGATGCAACGAGCGCGAGGCCAACTTCTTCCGCGAGGACCTGCGCTTCCCGGAGGCA 1333
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QY 254 AGGCCCGGAGTTCCCGAGCGAGAAACCGGCCAAACAGCCCCAGCCGCGAGCTGC 313  
DB AGGCCCGGAGTTCCCGAGCGAGAAACCGGCCAAACAGCCCCAGCCGCGAGCTGC 1393  
QY 314 AGGTGCGGCGGACAAACCCCGGAGCGAGGCGCGCGCGCGCGCGCGCGCGCGCG 373  
DB AGGTGCGGCGGACAAACCCCGGAGCGAGGCGCGCGCGCGCGCGCGCGCGCGCGCG 1394  
QY 374 TCCCGCGAGATCAACCTTGGGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 433  
DB TCCCGCGAGATCAACCTTGGGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 1454  
QY 434 AGGAGCGCGCTGCTGAGACCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 493  
DB AGGAGCGCGCTGCTGAGACCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 1514  
QY 494 GCAAGTGGAAACCCCAAGATGATCGGCGCGCATCGGCGCGCTTCAAGGTGCGCGCA 553  
DB GCAAGTGGAAACCCCAAGATGATCGGCGCGCATCGGCGCGCTTCAAGGTGCGCGCA 1574  
QY 554 ACCAGATCTGATCGAGATCTGCGGCAAGAGGCGCATCGGCGCGCGCGCGCGCGCG 613  
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QY 614 CCCCCTGAAATCATCTGCGCGCGCAATGCTGACCGAGCTGAGCTGCAACCTGAACTTC 673  
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QY 674 CCATCAGCCCATGAGACCGTGCCTGGAAGCTGGAAGCGCGCGCATGAGCGCGCGCAAG 733  
DB CCATCAGCCCATGAGACCGTGCCTGGAAGCTGGAAGCGCGCGCATGAGCGCGCGCAAG 1754  
QY 734 TGAAGCAGTGGCCCTGAGCGAGAGAGATCAAGGCGCTGACCGCGCATCTGCGAGAGA 793  
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DB TGGAGAAAGAGGCGCAAGATCAACGATCGGCGCGCGCGCGCGCGCGCGCGCGCGCG 1874  
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DB AGAGCAGATGACCAAGATCTTGGAGCGCTTCCGCGCGCGCGCGCGCGCGCGCGCGCG 2234  
QY 1214 ACCAGGCGCGCGCGCTGAGCGGAGCGAGCTGAGAGATCGGCGAGCGCGCGCGCG 1273  
DB ACCAGGCGCGCGCGCTGAGCGGAGCGAGCTGAGAGATCGGCGAGCGCGCGCGCGCG 2294  
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DB AGGAGCTGCGCAAGCAAGCTGCTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 2354  
QY 1334 AGGAGCGCGCGCGCTTCTGCGCGCATGAGCTGACCGCGCGCGCGCGCGCGCGCG 1393

DB 2414 AGGAGCGCGCGCGCTTCTGCGCGCATGAGCTGACCGCGCGCGCGCGCGCGCGCG 2473  
QY 1394 AGCTGCCCGAAGAGAGAGTGAACCTGGAACATCCAGAAAGCTGTGGCGAGCTGA 1453  
DB AGCTGCCCGAAGAGAGAGTGAACCTGGAACATCCAGAAAGCTGTGGCGAGCTGA 2474  
QY 1454 ACTGGGCGAGCGGATCTACCCCGCGCATCAAGGTGCGCGAGCGTGTCAAGCTGTCCG 1513  
DB ACTGGGCGAGCGGATCTACCCCGCGCATCAAGGTGCGCGAGCGTGTCAAGCTGTCCG 2534  
QY 1514 GCGCGAAGCGCTGACCGACATGCTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 1573  
DB GCGCGAAGCGCTGACCGACATGCTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 2594  
QY 1574 AGAACCAGAGATCTTCCGCGAGACCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 1633  
DB AGAACCAGAGATCTTCCGCGAGACCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 2654  
QY 1634 TGGTGGCCGAGATCCAGAAAGAGGCGCGAGCGACAGCTGAGACTTCAAGATCTCAAGAGC 1693  
DB TGGTGGCCGAGATCCAGAAAGAGGCGCGAGCGACAGCTGAGACTTCAAGATCTCAAGAGC 2714  
QY 1694 CTTTCAAGAACTTGAAGACCGCGCAAGTACCGCAAGATGCGCGCACCGCGCGCACCAACGACG 1753  
DB CTTTCAAGAACTTGAAGACCGCGCAAGTACCGCAAGATGCGCGCACCGCGCGCACCAACGACG 2774  
QY 1754 TGAAGAGCTGACCGGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 1813  
DB TGAAGAGCTGACCGGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 2834  
QY 1814 AGACCCCGAAGTTCGCGCTGCGCATCAGAAAGAGACTGAGAGACTGAGAGCGACT 1873  
DB AGACCCCGAAGTTCGCGCTGCGCATCAGAAAGAGACTGAGAGACTGAGAGCGACT 2894  
QY 1874 ACTGGAGGCGACCTTGAATCCCGAGTGGAGTTCGTGAACACCCCCCTGTGTAAAGC 1933  
DB ACTGGAGGCGACCTTGAATCCCGAGTGGAGTTCGTGAACACCCCCCTGTGTAAAGC 2954  
QY 1934 TGTGATCAAGAGCTGAGAGAGAGCGCATATCGGCGCGCGCGCGCGCGCGCGCGCG 1993  
DB TGTGATCAAGAGCTGAGAGAGAGCGCATATCGGCGCGCGCGCGCGCGCGCGCGCGCG 3014  
QY 1994 CCGCGAAGCGCGAGCAAGATGCGCAAGCGCGCTACAGTGAACGAGCGCGCGCGCGAG 2053  
DB CCGCGAAGCGCGAGCAAGATGCGCAAGCGCGCTACAGTGAACGAGCGCGCGCGCGAG 3074  
QY 2054 AGATCTGAGCTTGAACCGAGACCAACCAAGAGCGAGCTGCGAGGCGCATTCAGCTGG 2113  
DB AGATCTGAGCTTGAACCGAGACCAACCAAGAGCGAGCTGCGAGGCGCATTCAGCTGG 3134  
QY 2114 CCCTGAGAGACAGCGCGCAAGGAGTGAATCGTGAACGAGCGCGCGCGCGCGCGCG 2173  
DB CCCTGAGAGACAGCGCGCAAGGAGTGAATCGTGAACGAGCGCGCGCGCGCGCGCGCG 3194  
QY 2174 TCATCCAGGCG 2233  
DB TCATCCAGGCG 3254  
QY 2234 TGAATCAAGAAAGAGAGTGTACCTGAGCTGAGTGCCTGCGCGCGCGCGCGCGCG 2293  
DB TGAATCAAGAAAGAGAGTGTACCTGAGCTGAGTGCCTGCGCGCGCGCGCGCGCGCG 3314  
QY 2294 ACCAGGAGATGCGCAAGCTGAGAGAGAGGATCCGCGAAGGTGCTTCTTGGAGCGGCA 2353  
DB ACCAGGAGATGCGCAAGCTGAGAGAGAGGATCCGCGAAGGTGCTTCTTGGAGCGGCA 3374  
QY 2354 TCGATGCGCGCATCTGATCTACCACTACATGAGCAAGCTTGAACGATGAGCGCGCG 2413  
DB TCGATGCGCGCATCTGATCTACCACTACATGAGCAAGCTTGAACGATGAGCGCGCG 3434  
QY 2414 CTAGATCTAATTAAGCTTCCCGGCGCTAGCAACGCGT 2451



Db 3494 CTAGGATCGATTAAAGCTTCCCGGGCTAGCACCGGT 3531

## RESULT 11

US-10-190-435-12  
 ; Sequence 12, Application US/10190435  
 ; Publication No. US20030143248A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: ZUR WEGEDE, Jan  
 ; APPLICANT: BARNETT, Susan W.  
 ; APPLICANT: LIAN, Ying  
 ; APPLICANT: ENGELBRECHT, Susan  
 ; APPLICANT: VAN RENSBURG, Estrelita J.  
 ; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C  
 ; FILE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF  
 ; FILE REFERENCE: P18133.003 / 2302-18133  
 ; CURRENT APPLICATION NUMBER: US/10/190,435  
 ; CURRENT FILING DATE: 2002-12-30  
 ; NUMBER OF SEQ ID NOS: 319  
 ; SOFTWARE: PatentIn Ver. 2.0  
 ; SEQ ID NO 12  
 ; LENGTH: 5145  
 ; TYPE: DNA  
 ; ORGANISM: Artificial Sequence  
 ; FEATURE:  
 ; OTHER INFORMATION: Description of Artificial Sequence:  
 ; OTHER INFORMATION: GagcompPolmutInatRevNef\_C  
 US-10-190-435-12

Query Match 97.8%; Score 2401.8; DB 12; Length 5145;  
 Best Local Similarity 99.9%; Pred. No. 0;  
 Matches 2403; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY	14	TGCGGAGGCCATGAGCCAGGCGACAGCGCAACATCTGTATGAGCGAGCAACTTCA	73
Db	1487	TGCCGAGGCCATGAGCCAGGCGACAGCGCAACATCTGTATGAGCGAGCAACTTCA	1546
QY	74	AGGGCCCCAAGCGCATCATCAAGTCTTCAACTGGGCAAGGAGGCGCACATCGGCCCA	133
Db	1547	AGGGCCCCAAGCGCATCATCAAGTCTTCAACTGGGCAAGGAGGCGCACATCGGCCCA	1606
QY	134	ACTGCCGCCGCCCGCCCAAGAGGGCTGTGAAAGTGGCGCAAGGAGGCCACCAAGATGA	193
Db	1607	ACTGCCGCCGCCCGCCCAAGAGGGCTGTGAAAGTGGCGCAAGGAGGCCACCAAGATGA	1666
QY	194	AGGACTGCAACGAGCCAGGCGCACTTCTTCGGGAGGACCTGGCTTCCCGCAGGCA	253
Db	1667	AGGACTGCAACGAGCCAGGCGCACTTCTTCGGGAGGACCTGGCTTCCCGCAGGCA	1726
QY	254	AGGCCCGCGAGTTTCCCGCAGCGAGCAACCGCGGCCAACAGCCCCCAGCGCGAGCTGC	313
Db	1727	AGGCCCGCGAGTTTCCCGCAGCGAGCAACCGCGGCCAACAGCCCCCAGCGCGAGCTGC	1786
QY	314	AGGTGGCGGGGACACCCCGCAGCGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG	373
Db	1787	AGGTGGCGGGGACACCCCGCAGCGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG	1846
QY	374	TCCCCCAGATCACCTGTGGCAGCGCCCTTGTGTAGCATCAAGTGGCGGCCAGATCA	433
Db	1847	TCCCCCAGATCACCTGTGGCAGCGCCCTTGTGTAGCATCAAGTGGCGGCCAGATCA	1906
QY	434	AGGAGCCCTGTGGGACACCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG	493
Db	1907	AGGAGCCCTGTGGGACACCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG	1966
QY	494	GCAAGTGGAGCCCAAGATGATCGGCGCATTCGGCGGCTTCATCAAGTGGCGCGCTAGC	553
Db	1967	GCAAGTGGAGCCCAAGATGATCGGCGCATTCGGCGGCTTCATCAAGTGGCGCGCTAGC	2026
QY	554	ACCAGATCTCTGATCGAGATCTGGGCAAGAGGCCATCGGCGGCTGTGATCGGCGCGCA	613
Db	2027	ACCAGATCTCTGATCGAGATCTGGGCAAGAGGCCATCGGCGGCTGTGATCGGCGCGCA	2086

QY	614	CCCCCTGAACATCATTCGCGCGCAACATGCTGACCCAGCTGGGCTGACCCCTGAACCTTCC	673
Db	2087	CCCCCTGAACATCATTCGCGCGCAACATGCTGACCCAGCTGGGCTGACCCCTGAACCTTCC	2146
QY	674	CCATCAGCCCCCATCGAGACCGTCCCGTGAAGCTGAAGCCCGGCGCATGAGCGCCCCAAG	733
Db	2147	CCATCAGCCCCCATCGAGACCGTCCCGTGAAGCTGAAGCCCGGCGCATGAGCGCCCCAAG	2206
QY	734	TGAAGCAGTGGCCCTTGACCGGAGGAGAGATCAAGCCCTGACCCGCTATCTCGAGGAGA	793
Db	2207	TGAAGCAGTGGCCCTTGACCGGAGGAGAGATCAAGCCCTGACCCGCTATCTCGAGGAGA	2266
QY	794	TGAGAGAGGAGGAGGAGATCAACAGATCGGCGCGCGAGAACCCCTACACACCCCGTGT	853
Db	2267	TGAGAGAGGAGGAGGAGATCAACAGATCGGCGCGCGAGAACCCCTACACACCCCGTGT	2326
QY	854	TCGCCATCAAGAGAGGAGGAGCAGCACCAAGTGGCGCAAGCTGGTGAAGTTCGCGAGCTGA	913
Db	2327	TCGCCATCAAGAGAGGAGGAGCAGCACCAAGTGGCGCAAGCTGGTGAAGTTCGCGAGCTGA	2386
QY	914	ACAGCGCACCCAGGACTTCTGGGAGGTGACGTGGGATTCGCCACCCCGCGCGCTGA	973
Db	2387	ACAGCGCACCCAGGACTTCTGGGAGGTGACGTGGGATTCGCCACCCCGCGCGCTGA	2446
QY	974	AGAAGAGAGAGCGCTGACCGTGTGGAGCTGGCGAGCGCTTCTACGCGTCCCGCTCG	1033
Db	2447	AGAAGAGAGAGCGCTGACCGTGTGGAGCTGGCGAGCGCTTCTACGCGTCCCGCTCG	2506
QY	1034	ACGAGGACTTCCGCAAGTACACCGCTTCAACATCCCGAGCATCAACACGAGAGACCCCG	1093
Db	2507	ACGAGGACTTCCGCAAGTACACCGCTTCAACATCCCGAGCATCAACACGAGAGACCCCG	2566
QY	1094	GCATCGCTACAGTACAGAGTGTGCGCCAGGCGTGGAGGCGAGCCCGAGCTTCTCC	1153
Db	2567	GCATCGCTACAGTACAGAGTGTGCGCCAGGCGTGGAGGCGAGCCCGAGCTTCTCC	2626
QY	1154	AGAGCAGCATGACCAAGATCTCTGGAGCCCTTCCCGCGCGCGCAACCCCGAGAGTCT	1213
Db	2627	AGAGCAGCATGACCAAGATCTCTGGAGCCCTTCCCGCGCGCGCAACCCCGAGAGTCT	2686
QY	1214	ACCAGGCCCGCTGTACGTGGGAGGAGCTGGGAGATCGGCGAGGACCGCGCGCAAGTCG	1273
Db	2687	ACCAGGCCCGCTGTACGTGGGAGGAGCTGGGAGATCGGCGAGGACCGCGCGCAAGTCG	2746
QY	1274	AGGAGTGGCCAAAGCACCTGCTGCGTGGGGCTTCAACACCCCGCGCAAGAGACACAGA	1333
Db	2747	AGGAGTGGCCAAAGCACCTGCTGCGTGGGGCTTCAACACCCCGCGCAAGAGACACAGA	2806
QY	1334	AGGAGGCCCGCTTCTTCCCGCATCGAGTGCACCCCGCAAGTGGAGCCGTCGAGCCATCG	1393
Db	2807	AGGAGGCCCGCTTCTTCCCGCATCGAGTGCACCCCGCAAGTGGAGCCGTCGAGCCATCG	2866
QY	1394	AGTGGCCGAGAGGAGGAGCTGACCGTGAACACATCCAGAGCTGGTGGGCAAGCTGA	1453
Db	2867	AGTGGCCGAGAGGAGGAGCTGACCGTGAACACATCCAGAGCTGGTGGGCAAGCTGA	2926
QY	1454	ACTGGGCCAGCCAGATCTACCCCGCATCAAGGTGGCGCCAGCTGTGCAAGTCTCTCGCG	1513
Db	2927	ACTGGGCCAGCCAGATCTACCCCGCATCAAGGTGGCGCCAGCTGTGCAAGTCTCTCGCG	2986
QY	1514	GGCGCAAGGCCCTGACCGCATCTGTCGCCCTGACCGAGGAGCCGAGCTGGAGCTGGCGG	1573
Db	2987	GGCGCAAGGCCCTGACCGCATCTGTCGCCCTGACCGAGGAGCCGAGCTGGAGCTGGCGG	3046
QY	1574	AGAACCGCGAGATCTCGCGAGCCCGTGCACCGCTGTACTACGACCCCGAGCAAGGACC	1633
Db	3047	AGAACCGCGAGATCTCGCGAGCCCGTGCACCGCTGTACTACGACCCCGAGCAAGGACC	3106
QY	1634	TGTTGGCCGAGATCCAGAGAGGAGGCGCACGACAGTGGACCTACAGATCTTACAGGAGC	1693
Db	3107	TGTTGGCCGAGATCCAGAGAGGAGGCGCACGACAGTGGACCTTACAGATCTTACAGGAGC	3166
QY	1694	CTTTCAGAACCTTGAAGACCGGCAAGTACGCCAAGATGGCCACCGCCACCAACGAGC	1753

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Db      3167  CTTTCAAGAACTGMAAGACCGGCAAGTACCGCAAGATGCGACCGCCCAACCAACGACG 3226
Qy      1754  TGAAGCAGCTGACCGGAGCCGTGCAGAAAGATCGCATGAGAGATGTGATCTGGGGCA 1813
Db      3227  TGAAGCAGCTGACCGGAGCCGTGCAGAAAGATCGCATGAGAGATGTGATCTGGGGCA 3286
Qy      1814  AGACCCCCCAAGTTCCGCTGCGCCATCCAGAAAGAGACCTTGGAGACCTTGTGACCACT 1873
Db      3287  AGACCCCCCAAGTTCCGCTGCGCCATCCAGAAAGAGACCTTGGAGACCTTGTGACCACT 3346
Qy      1874  ACTGCGCAGCCCACTGATCTCCGAGTGGGAGTTCTGTAACACCCCTCCCTGTGTAAGC 1933
Db      3347  ACTGCGCAGCCCACTGATCTCCGAGTGGGAGTTCTGTAACACCCCTCCCTGTGTAAGC 3406
Qy      1934  TGTGCTCCAGCTGAGAGAGAGCCCATCATCCGCGCGCGAGACCTTCTAGTGAAGCGG 1993
Db      3407  TGTGCTCCAGCTGAGAGAGAGCCCATCATCCGCGCGCGAGACCTTCTAGTGAAGCGG 3466
Qy      1994  CCGCCCAACCGCGAGACCAAGTCCGCAAGGCGGCTACGTGACCGACCGGCGCCGCGAGA 2053
Db      3467  CCGCCCAACCGCGAGACCAAGTCCGCAAGGCGGCTACGTGACCGACCGGCGCCGCGAGA 3526
Qy      2054  AGATCGGAGCCTTGACCGGAGACCAACCAAGAAAGACCGAGCTGCAAGCCATCCAGCTGG 2113
Db      3527  AGATCGGAGCCTTGACCGGAGACCAACCAAGAAAGACCGAGCTGCAAGCCATCCAGCTGG 3586
Qy      2114  CCTGCGAGCAGCGGAGAGGTGAACATCGTGAACCGACGACGACGACGACGACGACGACG 2173
Db      3587  CCTGCGAGCAGCGGAGAGGTGAACATCGTGAACCGACGACGACGACGACGACGACGACG 3646
Qy      2174  TCATCCAGGCCCAAGCCGACAGAGAGCGAGCGAGCGAGCTGTGAACAGATCATCGAGCAGC 2233
Db      3647  TCATCCAGGCCCAAGCCGACAGAGAGCGAGCGAGCGAGCTGTGAACAGATCATCGAGCAGC 3706
Qy      2234  TGAATCAAGAGAGAGAGAGGTGTACTGAGCTGGGTCGCGCCCAAGAGGAGATCGGCGGCA 2293
Db      3707  TGAATCAAGAGAGAGAGAGGTGTACTGAGCTGGGTCGCGCCCAAGAGGAGATCGGCGGCA 3766
Qy      2294  ACAGAGCAGATCGACAAAGCTGTGAGCAAGGAGCATCCGCAAGGAGTGTCTCTGGAACGCGCA 2353
Db      3767  ACAGAGCAGATCGACAAAGCTGTGAGCAAGGAGCATCCGCAAGGAGTGTCTCTGGAACGCGCA 3826
Qy      2354  TCGATGCGGCGCATCTGTATCTACCAATGACATGACGACGACCTGTACGAGGAGCGCGCGCC 2413
Db      3827  TCGATGCGGCGCATCTGTATCTACCAATGACATGACGACGACCTGTACGAGGAGCGCGCGCC 3886
Qy      2414  CTAGG 2418
Db      3887  CTAGG 3891

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RESULT 12
US-10-190-435-48
; Sequence 48, Application US/10190435
; Publication No. US20030143248A1
; GENERAL INFORMATION:
; APPLICANT: ZUR MEGEDE, Jan
; APPLICANT: BARNETT, Susan W.
; APPLICANT: LIAN, Ying
; APPLICANT: ENGELBRECHT, Susan
; APPLICANT: VAN RENSBURG, Estrelita U.
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
; TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES, AND USES THEREOF
; FILE REFERENCE: P218133.003 / 2302-18133
; CURRENT APPLICATION NUMBER: US/10/190,435
; NUMBER OF SEQ ID NOS: 319
; SOFTWARE: Patent Ver. 2.0
; SEQ ID NO 48
; LENGTH: 3607
; TYPE: DNA
; ORGANISM: Artificial Sequence

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; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: p2PoltaRevNet_opt_C
US-10-190-435-48

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Query Match      95.4%; Score 2343.4; DB 12; Length 3607;
Best Local Similarity 98.3%; Pred. No. 0;
Matches 2368; Conservative 0; Mismatches 41; Indels 0; Gaps 0;

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Qy      1  GTGAGCGCAACCATGCGCGAGGCGCATGAGACCGAGCCCAAGAGCCCAAGATCTCTGATGCAAG 60
Db      1  GTGAGCGCAACCATGCGCGAGGCGCATGAGACCGAGCCCAAGAGCCCAAGATCTCTGATGCAAG 60
Qy      61  CGCAGCACTTCAAGGCGCCCAAGCGCATCATGCTTCAACTGCGGCAAGAGGGC 120
Db      61  CGCAGCACTTCAAGGCGCCCAAGCGCATCATGCTTCAACTGCGGCAAGAGGGC 120
Qy      121  CACATGCGCGCACTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 180
Db      121  CACATGCGCGCACTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 180
Qy      181  GCGCACCAAGTGAAGAGTGCACCGAGGCGCGAGGCGCACTTCTCCGCGAGGACCTGGCC 240
Db      181  GCGCACCAAGTGAAGAGTGCACCGAGGCGCGAGGCGCACTTCTCCGCGAGGACCTGGCC 240
Qy      241  TTCCCCCAAGGCGCAAGGCGCGCGAGTTCCCAAGGCGCAAGACCGCGCAACAGCCCAACC 300
Db      241  TTCCCCCAAGGCGCAAGGCGCGCGAGTTCCCAAGGCGCAAGACCGCGCAACAGCCCAACC 300
Qy      301  AGCCGCGAGCTGAGGTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 360
Db      301  AGCCGCGAGCTGAGGTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 360
Qy      361  GGCACCCCTGAACCTTCCCGAGATCACTCGTGGAGAGCGCCCTGTGTGAGATCAAGGTG 420
Db      361  GGCACCCCTGAACCTTCCCGAGATCACTCGTGGAGAGCGCCCTGTGTGAGATCAAGGTG 420
Qy      421  GCGGCGCAATCAAGAGGCGCTGTGACACCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 480
Db      421  GCGGCGCAATCAAGAGGCGCTGTGACACCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 480
Qy      481  ATGAGCCTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 540
Db      481  ATGAGCCTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCG 540
Qy      541  GTGCGCAGATCAACACAGATCTGATCGAGATGTGCGGCAAGAGGCGCATCGCGCGCTTCAATCAAG 600
Db      541  GTGCGCAGATCAACACAGATCTGATCGAGATGTGCGGCAAGAGGCGCATCGCGCGCTTCAATCAAG 600
Qy      601  CTGATGCGGCCCAACCGCGGTGAACATCATCGGCGCGCAATGCTGAACCAAGCTGAGCTGC 660
Db      601  CTGATGCGGCCCAACCGCGGTGAACATCATCGGCGCGCAATGCTGAACCAAGCTGAGCTGC 660
Qy      661  ACCCTGAATTTCCCATGAGCCCATGAGACCGGTGCGCGCGCGCGCGCGCGCGCGCGCGCG 720
Db      661  ACCCTGAATTTCCCATGAGCCCATGAGACCGGTGCGCGCGCGCGCGCGCGCGCGCGCGCG 720
Qy      721  GAGCGCCCAAGGTGAAGAGTGGCCCTGACCGAGAGAGAAATCAAGGCGCGCGCGCGCGCGCG 780
Db      721  GAGCGCCCAAGGTGAAGAGTGGCCCTGACCGAGAGAGAAATCAAGGCGCGCGCGCGCGCGCG 780
Qy      781  ATCTGCGAGAGATGAGAGAGAGGCGCAAGATCAACCAAGTGGCGCGCGCGCGCGCGCGCG 840
Db      781  ATCTGCGAGAGATGAGAGAGAGGCGCAAGATCAACCAAGTGGCGCGCGCGCGCGCGCGCG 840
Qy      841  AACACCCCGGTGTGCGCATCAAGAGAGAGGCGCAAGATCAACCAAGTGGCGCGCGCGCGCG 900
Db      841  AACACCCCGGTGTGCGCATCAAGAGAGAGGCGCAAGATCAACCAAGTGGCGCGCGCGCGCG 900
Qy      901  TTCGCGAGCTGAACAGGCGCAACCGAGACTTCTGAGAGTGTGCAAGTGGCGCATCCCGCAC 960
Db      901  TTCGCGAGCTGAACAGGCGCAACCGAGACTTCTGAGAGTGTGCAAGTGGCGCATCCCGCAC 960
Qy      961  CCGCGCGCGCTGAAGAGAGAGAGGCGTGAACGCTGTGAGAGTGGCGCAAGCGCTTACTTC 1020

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Db	2041	CGGGCGCGGAGAGATCGTGAGCTTGACCGAGACCAACCAAGAGACCGAGCTGCAG	2100
Qy	2101	GCCATCCAGCTGGCCCTGCAGGACAGCGGACGAGTGAACATCGTGACCGACAGCCAG	2160
Db	2101		
Db	2101	GCCATCCAGCTGGCCCTGCAGGACAGCGGACGAGTGAACATCGTGACCGACAGCCAG	2160
Qy	2161	TACGCCCTGGGCATCATCCAGGCGCCAGCCCGACAAGAGCGAGCGAGCTGGTGAACCCAG	2220
Db	2161	TAGCCCTGGGCATCATCCAGGCGCCAGCCCGACAAGAGCGAGCGAGCTGGTGAACCCAG	2220
Qy	2221	ATCATCGAGCAGCTGATCAAGAGGAGAGAGTGTACTGTAGCTGGGTGCGCGCCCAACAG	2280
Db	2221	ATCATCGAGCAGCTGATCAAGAGGAGAGAGTGTACTGTAGCTGGGTGCGCGCCCAACAG	2280
Qy	2281	GGCATCGCGCGCAACGAGCAGATCGCAAGCTGGTGAGCAAGGSCATCCCGAAGGTGCTG	2340
Db	2281	GGCATCGCGCGCAACGAGCAGATCGCAAGCTGGTGAGCAAGGSCATCCCGAAGGTGCTG	2340
Qy	2341	TTCTTGACGGCATCGATGGCGGCATCGTGATCTACCACTACATGACGACCTGTACTGTG	2400
Db	2341	GAATTGAGCCCGTGGACCCCAACCTGGAGCCCTGGAACCAACCCCGGACCGACCCCAAG	2400
Qy	2401	GGCAGCGGC	2409
Db	2401		
		ACCGCGGC	2409
RESULT 13			
US-10-190-435-46			
; Sequence 46, Application US/10190435			
; Publication No. US20030143248A1			
; GENERAL INFORMATION:			
; APPLICANT: ZUR MEGEDE, Jan			
; APPLICANT: BARNETT, Susan W.			
; APPLICANT: LIAN, Ying			
; APPLICANT: ENGELBRECHT, Susan			
; APPLICANT: VAN RENSBURG, Estrelita J.			
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C			
; TITLE OF INVENTION: POLYPEPTIDES POLYPEPTIDES AND USES THEREOF			
; FILE REFERENCE: PP18133.003 / 2302-18133			
; CURRENT APPLICATION NUMBER: US/10/190,435			
; CURRENT FILING DATE: 2002-12-30			
; NUMBER OF SEQ ID NOS: 319			
; SOFTWARE: Patent In Ver. 2.0			
; SEQ ID NO 46			
; LENGTH: 3597			
; TYPE: DNA			
; ORGANISM: Artificial Sequence			
; FEATURE:			
; OTHER INFORMATION: Description of Artificial Sequence: p2PolTatRevNef opt C			
US-10-190-435-46			
Query Match			
Best Local Similarity 94.5%; Score 2325.2; DB 12; Length 3597;			
Matches 2330; Conservative 0; Mismatches 8; Indels 0; Gaps 0;			
Qy	4	GAGCGCACCATGCGCGAGGCGCATGAGCGCGCCAGCGCCCAACAGCGCCCAACATCTGTATGACGCGC	63
Db	1258	GATCGCAATTCGCCGAGGCGCATGAGCGCGCCAGCGCGCCCAACATCTGTATGACGCGC	1317
Qy	64	AGCAACTTCAAGGGCCCCAAGCGCATCATCAAGTGTCTTCAACTGCGGCAAGGAGGGCCAC	123
Db	1318	AGCAACTTCAAGGGCCCCAAGCGCATCATCAAGTGTCTTCAACTGCGGCAAGGAGGGCCAC	1377
Qy	124	ATCGCGCAACTGCGCGCGCCCCCGCAAGAGAGGGTGTGTGAAGTGTGCGCAAGGAGGC	183
Db	1378	ATCGCGCGCAACTGCGCGCGCCCCCGCAAGAGAGGGTGTGTGAAGTGTGCGCAAGGAGGC	1437
Qy	184	CACCATGAAGACTGCAACGAGCGCGCCAGCCCACTTCTTCGCGAGGACCTGGGCTTC	243
Db	1438	CACCATGAAGACTGCAACGAGCGCGCCAGCCCACTTCTTCGCGAGGACCTGGGCTTC	1497
Qy	244	CCCCAGGCAAGCGCGCGAGTTCCCCAGCGAGCAACCGCGCGCAACAGCGCCCAACGAGC	303

Db 1498 CCCCAGGGCAAGGCCCCGAGTTCCCAAGCGAGCAAGCCGGCCAAACAGCCCCACAGC 1557  
 Qy 304 CGCGAGCTGCAAGGTGCGGGGCAACAACCCCGACCGAGCGCGGCCGAGCCGCAAGGCG 363  
 Db 1558 CGGAGCTGCAAGGTGCGGGGCAACAACCCCGACCGAGCGCGGCCGAGCCGCAAGGCG 1617  
 Qy 364 ACCCTGAACCTTCCCCAGATCAACCTGTGGACGCGCCCTGTGTAGCATCAAGTGGGC 423  
 Db 1618 ACCCTGAACCTTCCCCAGATCAACCTGTGGACGCGCCCTGTGTAGCATCAAGTGGGC 1677  
 Qy 424 GCGCAGATCAAGAGGCGCTTCTGTGAACAACCGCGCCGACGACACCTGTCTGAGAGATG 483  
 Db 1678 GCGCAGATCAAGAGGCGCTTCTGTGAACAACCGCGCCGACGACACCTGTCTGAGAGATG 1737  
 Qy 484 AGCTGCGCGGCAAGTGGAAAGCCCAAGATGATCGGCGGCGCATCGCGGCTTATCAAGTGG 543  
 Db 1738 AGCTGCGCGGCAAGTGGAAAGCCCAAGATGATCGGCGGCGCATCGCGGCTTATCAAGTGG 1797  
 Qy 544 CGCAGATCAAGATCTGTATCGAGATCTGCGGCAAGAGGCCATCGGACCGTGTG 603  
 Db 1798 CGCAGATCAAGATCTGTATCGAGATCTGCGGCAAGAGGCCATCGGACCGTGTG 1857  
 Qy 604 ATGCGCCCCACCCCGTGAACATATGCGCGGCAACATGCTGACCCAGCTGAGCTGCAAC 663  
 Db 1858 ATGCGCCCCACCCCGTGAACATATGCGCGGCAACATGCTGACCCAGCTGAGCTGCAAC 1917  
 Qy 664 CTGAACCTTCCCATCAAGCCCATGAGACCGTGCCTGTGAAGTGAAGCCCGGATGAG 723  
 Db 1918 CTGAACCTTCCCATCAAGCCCATGAGACCGTGCCTGTGAAGTGAAGCCCGGATGAG 1977  
 Qy 724 GCGCCCCAGGTGAAGCACTGCGCCCTTACCGAGAGAAAGATCAAGGCCCTGACCGCATC 783  
 Db 1978 GCGCCCCAGGTGAAGCACTGCGCCCTTACCGAGAGAAAGATCAAGGCCCTGACCGCATC 2037  
 Qy 784 TGGAGAGAGATGAGAGAGAGAGAGATCAACCAAGATCGGCGCGGAAACCCCTTACAC 843  
 Db 2038 TGGAGAGAGATGAGAGAGAGAGAGATCAACCAAGATCGGCGCGGAAACCCCTTACAC 2097  
 Qy 844 ACCCGCGTGTCCCATCAAGAGAGAGAGAGATCAACCAAGTGGCGAGATGATGATTC 903  
 Db 2098 ACCCGCGTGTTCCTCCCATCAAGAGAGAGAGAGATCAACCAAGTGGCGAGATGATGATTC 2157  
 Qy 904 CGGAGGTGAACAAGCGCACCCAGAGCTTGTGGAGGTGCAAGTGGCATCCCCACCC 963  
 Db 2158 CGGAGGTGAACAAGCGCACCCAGAGCTTGTGGAGGTGCAAGTGGCATCCCCACCC 2217  
 Qy 964 GCGGCGCTGAAGAGAGAGAGAGAGAGATGAGAGCTGTGGACGCGCTTACTTACG 1023  
 Db 2218 GCGGCGCTGAAGAGAGAGAGAGAGAGATGAGAGCTGTGGACGCGCTTACTTACG 2277  
 Qy 1024 GTGCCCCGTGACAGAGATCCGCAAGTACACCGCTTACCATCCCGAGATCAACAAC 1083  
 Db 2278 GTGCCCCGTGACAGAGATCCGCAAGTACACCGCTTACCATCCCGAGATCAACAAC 2337  
 Qy 1084 GAGACCCCCGCGATCCGCTACAGTACCAAGTGTGCTGCCAGGCTGAAAGGCAAGCCC 1143  
 Db 2338 GAGACCCCCGCGATCCGCTACAGTACCAAGTGTGCTGCCAGGCTGAAAGGCAAGCCC 2397  
 Qy 1144 AGCATCTCCAGAGAGAGATCAAGATCTGTGAGAGCTTCCGCGCCGCAACCCCGAG 1203  
 Db 2398 AGCATCTCCAGAGAGAGATCAAGATCTGTGAGAGCTTCCGCGCCGCAACCCCGAG 2457  
 Qy 1204 ATGATGATCTACAGAGCCCCCTGTACGTTGGAGAGAGACCTGAGATCGGCGACAGCCG 1263  
 Db 2458 ATGATGATCTACAGAGCCCCCTGTACGTTGGAGAGAGACCTGAGATCGGCGACAGCCG 2517  
 Qy 1264 GCGAAGATGAGAGAGCTGGCGAAGCACTGCTGCGTGGGCTTCAACACCCCGCAAG 1323  
 Db 2518 GCGAAGATGAGAGAGCTGGCGAAGCACTGCTGCGTGGGCTTCAACACCCCGCAAG 2577  
 Qy 1324 AAGCACAGAGAGCCCCCTTCTGCGCATGAGCTGCAACCCCGCAAGAGTGGACCGTG 1383

Db 2578 AAGCACAGAGAGCCCCCTTCTGCGCATGAGCTGCAACCCCGCAAGTGGACCGTG 2637  
 Qy 1384 CAGCCCATGAGCTGCCCGAAGAGAGAGTGAACCTGGAACAATCAAGAGTGTG 1443  
 Db 2638 CAGCCCATGAGCTGCCCGAAGAGAGAGTGAACCTGGAACAATCAAGAGTGTG 2697  
 Qy 1444 GCGAAGTGAACCTGGGCGAGCGAGTCTACCCCGGATCAAGTGGCGGCACTGTGCAAG 1503  
 Db 2698 GCGAAGTGAACCTGGGCGAGCGAGTCTACCCCGGATCAAGTGGCGGCACTGTGCAAG 2757  
 Qy 1504 CTGCTGGCGCGCGCAAGGCCCTTGAACCATGTCCTTGAACCGAGAGCGGAGCTG 1563  
 Db 2758 CTGCTGGCGCGCGCAAGGCCCTTGAACCATGTCCTTGAACCGAGAGCGGAGCTG 2817  
 Qy 1564 GAGCTGGCGAGAACCGCGAGATCTGCGGAGACCTGTGACGCGCTGTACTAGACCCC 1623  
 Db 2818 GAGCTGGCGAGAACCGCGAGATCTGCGGAGACCTGTGACGCGCTGTACTAGACCCC 2877  
 Qy 1624 AGCAGAGACTGTGGCGGAGATCCAGAGAGAGGCGCAAGCAAGTGAACCTTACAGATC 1683  
 Db 2878 AGCAGAGACTGTGGCGGAGATCCAGAGAGAGGCGCAAGCAAGTGAACCTTACAGATC 2937  
 Qy 1684 TACCAGAGCCCTTCAAGAACTGAAGACCGGCAAGTACGCAAGATGCGCACCGCCAC 1743  
 Db 2938 TACCAGAGCCCTTCAAGAACTGAAGACCGGCAAGTACGCAAGATGCGCACCGCCAC 2997  
 Qy 1744 ACCAAGAGTGAAGAGAGCTGACCGGAGCGCGTGCAGAAAGTCCCATGAGACATCTG 1803  
 Db 2998 ACCAAGAGTGAAGAGAGCTGACCGGAGCGCGTGCAGAAATCCCATGAGACATCTG 3057  
 Qy 1804 ATCTGGGCGAAGACCCCAAGTTCCGCTGCCCATCAAGAGAGACTGGGAGACTGG 1863  
 Db 3058 ATCTGGGCGAAGACCCCAAGTTCCGCTGCCCATCAAGAGAGACTGGGAGACTGG 3117  
 Qy 1864 TGAACCGACTTACTGCGAGGCGCACCTGAGTCCCGAGTGGAGATTCTGTGAACAACCCCGC 1923  
 Db 3118 TGAACCGACTTACTGCGAGGCGCACCTGAGTCCCGAGTGGAGATTCTGTGAACAACCCCGC 3177  
 Qy 1924 CTGTGAAGCTGTGTGATCAAGCTGAGAGAGAGAGCCCATATGGCGCGGACCTTCTAC 1983  
 Db 3178 CTGTGAAGCTGTGTGATCAAGCTGAGAGAGAGAGCCCATATGGCGCGGACCTTCTAC 3237  
 Qy 1984 GTGAGCGGCGCGCACCGGAGAGCAAGATTCGCAAGCGCGGCTACGTCGACCGG 2043  
 Db 3238 GTGAGCGGCGCGCACCGGAGAGCAAGATTCGCAAGCGCGGCTACGTCGACCGG 3297  
 Qy 2044 GCGCGGCAAGATGTGAGCTTGAACGAGACCAACCAAGAGCCGAGCTGACGCGC 2103  
 Db 3298 GCGCGGCAAGATGTGAGCTTGAACGAGACCAACCAAGAGCCGAGCTGACGCGC 3357  
 Qy 2104 ATCCAGCTGGCCCTGAGAGAGAGCGGCAAGGCTGGAACATGTGTACCGACGCACTAC 2163  
 Db 3358 ATCCAGCTGGCCCTGAGAGAGAGCGGCAAGGCTGGAACATGTGTACCGACGCACTAC 3417  
 Qy 2164 GCGCTGGGATCATCAAGCCCGACCGCAAGAGCGAGAGAGTGGTGAACAGATC 2223  
 Db 3418 GCGCTGGGATCATCAAGCCCGACCGCAAGAGCGAGAGTGGTGAACAGATC 3477  
 Qy 2224 ATCGAGAGCTGTATCAAGAGAGAGAGTGTACTGAGCTGGGTGCCGCCCAAGAGGC 2283  
 Db 3478 ATCGAGAGCTGTATCAAGAGAGAGAGTGTACTGAGCTGGGTGCCGCCCAAGAGGC 3537  
 Qy 2284 ATCGCGGCGAAGACAGATGAGCAAGCTGGGAGACAGAGGATCCGCAAGTGTGT 2341  
 Db 3538 ATCGCGGCGAAGACAGATGAGCAAGCTGGGAGACAGAGGATCCGCAAGTGTGT 3595

## RESULT 14

US-10-190-435-47

; Sequence 47, Application US/10190435

; Publication No. US20030143248A1

; GENERAL INFORMATION:

; APPLICANT: ZUR MEGADE, Jan

```
; APPLICANT: BARNETT, Susan W.
; APPLICANT: LIAN, Ying
; APPLICANT: ENGELBRECHT, Susan
; APPLICANT: VAN RENSBURG, Estrelita J.
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
; TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF
; FILE REFERENCE: P18133.003 / 2302-18133
; CURRENT APPLICATION NUMBER: US/10/190,435
; CURRENT FILING DATE: 2002-12-30
; NUMBER OF SEQ ID NOS: 319
; SOFTWARE: PatentIn ver. 2.0
; SEQ ID NO 47
; LENGTH: 3624
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence:
; OTHER INFORMATION: p2Pol1atRevNef.opt.native_C
; US-10-190-435-47

Query Match      93.4%; Score 2295.8; DB 12; Length 3624;
Best Local Similarity 97.6%; Pred. No. 0;
Matches 2356; Conservative 0; Mismatches 47; Indels 12; Gaps 2;

QY 7 GCCACCATGCGCGAGGCGCATGAGCCAGGCCACCCAGCGCCCAACATCCTGATCGAGCGCAGC 66
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QY 67 AACTTCAGGGCCCCCAAGCGCATCATCAAGTGTCTTCACTCGGGGAGGAGGGCCACATC 126
DB 61 AACTTCAGGGCCCCCAAGCGCATCATCAAGTGTCTTCACTCGGGGAGGAGGGCCACATC 120

QY 127 GCCCGCAACTGCGCGCCCCCGCCGCAAGAGGGCTGCTGGAGTGGCGCAAGAGGGGCCAC 186
DB 121 GCCCGCAACTGCGCGCCCCCGCCGCAAGAGGGCTGCTGGAGTGGCGCAAGAGGGGCCAC 180

QY 187 CAGATGAAGGACTCACCGAGCGCGCAGCCCAACTTCTTCCGCGAGGACCTGGCCCTTCCCC 246
DB 181 CAGATGAAGGACTCACCGAGCGCGCAGCCCAACTTCTTCCGCGAGGACCTGGCCCTTCCCC 240

QY 247 CAGGGCAAGCGCCGAGTTCCTCCAGCGAGCAGAGAACCGCGCCACAGCCGCCACAGCGCG 306
DB 241 CAGGGCAAGCGCCGAGTTCCTCCAGCGAGCAGAGAACCGCGCCACAGCCGCCACAGCGCG 300

QY 307 GAGCTGCAGGTGCGCGCGCGCAACCCCGCGAGCGAGCGCGCGCGCGCGCGCGCGCGCGC 366
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QY 367 CTGAATCTCCCGCAGATCACTCTGTGCGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCGC 426
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QY 427 CAGATCAAGAGGCGCTGTGGACACCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGC 486
DB 421 CAGATCAAGAGGCGCTGTGGACACCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGC 480

QY 487 CTGCGCGCGCAAGTGGAAAGCCCAAGATGATCGGGGCGATCGGGGCGCTTCAATCAAGGTGCGC 546
DB 481 CTGCGCGCGCAAGTGGAAAGCCCAAGATGATCGGGGCGATCGGGGCGCTTCAATCAAGGTGCGC 540

QY 547 CAGTACGACAGATCTGATCGAGATCTGCGGCAAGAGGCCATCGGCACCGTGTCTGATC 606
DB 541 CAGTACGACAGATCTGATCGAGATCTGCGGCAAGAGGCCATCGGCACCGTGTCTGATC 600

QY 607 GGGCCCAACCCCGTGAACATCATCGGCGCGCAACATGTGACCCAGCTGGGCTGACCCCTG 666
DB 601 GGGCCCAACCCCGTGAACATCATCGGCGCGCAACATGTGACCCAGCTGGGCTGACCCCTG 660

QY 667 AACTTCCCCATCAGCCCATCGAGACCGTGCCTGTGAAGCTGAAGCCCGCATGGACCGC 726
DB 661 AACTTCCCCATCAGCCCATCGAGACCGTGCCTGTGAAGCTGAAGCCCGCATGGACCGC 720

QY 727 CCCAAGGTGAAGCATGTGGCCCTTGACCGGAGGAGAGATCAAGGCCCTTGACCGGCCATCTGC 786
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DB 721 CCCAAGGTGAAGCATGTGGCCCTTGACCGAGGAGAGATCAAGGCCCTTGACCGCATCTGC 780
QY 787 GAGGAGATGAGAAAGAGGAGGCAAGATCACCAAGATCGGCCCGGAGAAACCCCTACAACACC 846
DB 781 GAGGAGATGAGAAAGAGGAGGCAAGATCACCAAGATCGGCCCGGAGAAACCCCTACAACACC 840
QY 847 CCCTGTTCGGCATCAAGAGAGAGGACAGCACCAAGTGGCGCAAGCTGGTGGATTCGCG 906
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QY 907 GAGCTGAACAAGCGCACCCAGAGCTTCTGGGAGTGCAGCTGGGCATCCCCACCCCGCC 966
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DB 961 GGCCTGAAGAGAGAGAGCGTGCACCGTGTGGACGTGGCGCACGGCTACTTTCAGCGTG 1020
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DB 1021 CCCTTGACAGGACCTTCCGCAAGTACACCGCTTACCATCCCGAGATCAACAAGAG 1080
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DB 1081 ACCCCCGGCATCCGCTACCAAGTACCAAGTGTGCCCGAGGGCTGGAAGGGCAGCCCGCAG 1140
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DB 1141 ATCTTCAGAGCAGCATGACCAAGATCTTGGAGCCCTTCCGCGCGCCCAACCCCGAGATC 1200
QY 1207 GTGATCTTACCA-----GGCCCCCTGTAGTGGGCGAGCACTTGGAGATCGGCCAGAC 1260
DB 1201 GTGATCTTACCAAGTACGAGAGCTGCGCAAGTCTTGGAGCCCTTCCGCGCGCCCAACCCCGAGATC 1260
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DB 1441 AAGCTGTGGGCAAGCTGAACCTGGGCGCAGCCAGATCTACCCCGGCGCATCAAGGTGCGCCAG 1500
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DB 1501 CTGTGCAAGCTGTGCGCGCGCCCAAGGCGCTGACCCGACATCTGTGCGCCCTTGACCGAGGAG 1560
QY 1555 GCGAGCTGGAGTGGCGCGAGAACCGCGAGATCTTCCGCGAGCCCGTGCACGCGCTGTAC 1614
DB 1561 GCGAGCTGGAGTGGCGCGAGAACCGCGAGATCTTCCGCGAGCCCGTGCACGCGCTGTAC 1620
QY 1615 TAGGACCCCGAGAGGACCTGTGGCGGAGATCCAGAAGCAGGGCCACGACAGTGGAGC 1674
DB 1621 TAGGACCCCGAGAGGACCTGTGGCGGAGATCCAGAAGCAGGGCCACGACAGTGGAGC 1680
QY 1675 TACCAGATCTACGAGAGCCCTTCAAGAACCTTAAGAACCTGAAGACCGGCAAGTACGCCAAGATCGCG 1734
DB 1681 TACCAGATCTACGAGAGCCCTTCAAGAACCTTGAAGAACCTGAAGACCGGCAAGTACGCCAAGATCGCG 1740
QY 1735 ACCGCGCCACCAACGAGCTGAAGGCTGACCGAGCGCGTGCAGAGATCGCCATGGAG 1794
DB 1741 ACCGCGCCACCAACGAGCTGAAGGCTGACCGAGCGCGTGCAGAGATCGCCATGGAG 1800
QY 1795 AGCATCTGATCTGGGGCAAGACCCCGAGTTCGCGCTCCCGCATCCAGAGGAGGACCTGC 1854
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Db 1801 AGCATCTGATCTGGGGCAAGACCCCAAGTTCCGCTCCCATTCAGAGAGACCTGG 1860  
 QY 1855 GAGACCTGTGTGACCGCACTACTGTGAGAGCCCACTTGATATCCCGAGTGGAGTCTGTGAC 1914  
 Db 1861 GAGACCTGTGTGACCGCACTACTGTGAGAGCCCACTTGATATCCCGAGTGGAGTCTGTGAC 1920  
 QY 1915 ACCCCCCCTGTGTGAGAGTGTGTGTAACAGCTGAGAGAGAGCCCATATCGGCGCCGAG 1974  
 Db 1921 ACCCCCCCTGTGTGAGAGTGTGTGTAACAGCTGAGAGAGAGCCCATATCGGCGCCGAG 1980  
 QY 1975 ACCCTTCACGTGAGAGAGAGCCGCAACCGCGAGACCAAGATTCGCGAGAGCCGCTAGCTG 2034  
 Db 1981 ACCCTTCACGTGAGAGAGAGCCGCAACCGCGAGACCAAGATTCGCGAGAGCCGCTAGCTG 2040  
 QY 2035 ACCGACCGGAGCCGCGAGAGAGTGTGAGCTGTGACCGAGACCAACCAAGAGAGAGCCGAG 2094  
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 Db 2101 CTGCAAGGCAATCCAGCTGTGGCTCTGAGAGACAGCGGCAAGCGAGGTGAACATCTGTGACCCGAC 2160  
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 Db 2161 AGCCAGTACGCGCCCTGTGATCATCATGAGCCCAAGCCGCAAGAGAGAGAGAGAGCTGTG 2220  
 QY 2215 AACCAATCATCTGAGAGCTGTATCAAGAGAGAGAGTGTACTGTAGCTGTGTGCGCCG 2274  
 Db 2221 AACCAATCATCTGAGAGCTGTATCAAGAGAGAGAGTGTACTGTAGCTGTGTGCGCCG 2280  
 QY 2275 CACAAGGGCATTCGGCGGCAACGAGAGATGAGACAGTGTGTGAGAGAGGGCATTCGCAAG 2334  
 Db 2281 CACAAGGGCATTCGGCGGCAACGAGAGATGAGACAGTGTGTGAGAGAGGGCATTCGCAAG 2340  
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RESULT 15  
 US-10-241-009-30  
 / Sequence 30, Application US/10241009  
 / Publication No. US20030170614A1  
 / GENERAL INFORMATION:  
 / APPLICANT: ZUR MEGEDE, Jan  
 / APPLICANT: BARNETT, Susan  
 / APPLICANT: LIAN, Ying  
 / TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE B  
 / FILE REFERENCE: 2300-1621 21  
 / CURRENT APPLICATION NUMBER: US/10/241, 009  
 / NUMBER OF SEQ ID NOS: 68  
 / SOFTWARE: PatentIn Ver. 2.0  
 / SEQ ID NO 30  
 / LENGTH: 2460  
 / TYPE: DNA  
 / ORGANISM: Artificial Sequence  
 / FEATURE:  
 / OTHER INFORMATION: Description of Artificial Sequence:  
 / OTHER INFORMATION: p2Pol.opt.yymm.sff2  
 US-10-241-009-30

Query Match 86.9%; Score 2136; DB 12; Length 2460;  
 Best Local Similarity 92.7%; Pred. No. 0;  
 Matches 2280; Conservative 0; Mismatches 165; Indels 15; Gaps 3;  
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Db 1 GCCACATGAGCCGAGCGATGAGCGAGTGAACGAACCCGGGCAACCATATGATGACAGCG 60  
 QY 64 AGCAATCTTCAAGGAGCCCAAGCCGATCATTAAGTCTTCAATGCGGCAAGAGAGGCGAC 123  
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 Db 301 CCGGAGCTGAGAGTGGCG 360  
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 QY 412 ATCAAGTGGCG 471  
 Db 421 ATCAAGTGGCG 480  
 QY 472 CTGAGAGATGAGAGCTGCG 531  
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 QY 532 TTCTATTAAGTGGCG 591  
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 QY 652 CTGGGCTGACCCCTGAACTTCCCATCAAGCCCATGAGACCGTGGCGCGCGCGCGCGCG 711  
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 QY 712 CCGGCGATGAGAGCG 771  
 Db 721 CCGGCGATGAGAGCG 780  
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 QY 952 ATCCCGGACCG 1011  
 Db 961 ATCCCGGACCG 1020  
 QY 1012 GCTTACTTCAAGTGTCCCTGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 1071  
 Db 1021 GCTTACTTCAAGTGTCCCTGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 1080  
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 Db 1081 AGCATCAACAG 1140



